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October 1998

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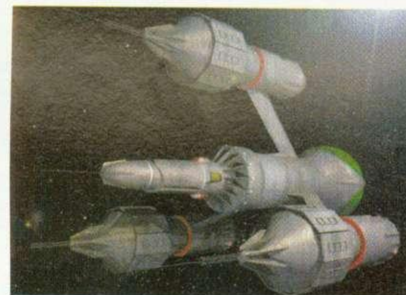
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Next month in **Acorn User**
The 200th issue of *Acorn User* – cover CD, Acorn World Show feature, privacy on the Internet and more in a bumper issue
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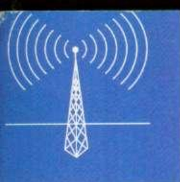
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Computer systems.. £12 + vat
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All goods are guaranteed but not supplied on approval



Plans for next-generation StrongARMs

Much as we all love the StrongARM processor which makes Acorn's top of the range solutions so impressive, the very same technology has been testing the devotion of both its fans and its new owners – Intel.



Apparently, Intel insiders have been having 'emotional' problems in getting to grips with their new asset. It's a bit like Sainsbury's having to stock Marks & Spencer groceries – it doesn't seem to fit. But M&S sell things Sainsbury's can't offer and it's the same with Intel.

The much-hated purveyor of processors for PCs have no low power-consumption, low cost but high performance RISC chip for battery-powered and cost-sensitive products.

StrongARM may well be alien technology, but Intel are gradually learning to love it and news is seeping out of Intel's plans for StrongARM. A second-generation StrongARM core, called SA-2, should be ready in just over a year's time. SA-3 is expected some time after that, officials said. SA-2 and SA-3 will both take advantage of fabrication process advancements being made by Intel. It's likely that SA-2 chips will be made using a 0.18 micron process and SA-3 will use a 0.13 micron process.

The smaller the process, the faster you can run the chip and the less power it consumes. Although nobody else uses StrongARMs for workstation products, the news is comforting for Acorn and the Phoebe 2100 as it's almost guaranteed that versions of the StrongARM double or even triple the speed of the current 233MHz parts may be on the production line before the end of 1999, after all, 300 and 350MHz parts are already being sampled using the older 0.25 micron process.

Canon makes light work of travelling

Canon's newest ink-jet printer is the diminutive BJC-50. It weighs just 900 grams, including its lithium ion rechargeable battery. Canon actually claims the BJC-50 is the world's smallest and lightest ink-jet printer. Despite its tiny dimensions, the BJC-50 is not devoid of interesting features – it's a colour printer and an optional colour scanner unit can be snapped into the ink cartridge holder if required.

Canon's own drop-modulation technology is also used to maximise print quality. Apparently, this is achieved by using a two stage heating process in the print head nozzles to more precisely form a dot on the page.

The lithium ion battery is good for around a hundred sheets of paper when printing ordinary text and the mains power adapter is world-standard. Infra-red communications is built in to the BJC-50, making it ideal for laptops – Peanut fans take note, or even with the new Phoebe 2100's standard IrDA port.

Miniaturisation comes at a price – the BJC-50 has a recommended price of £269 plus VAT, but it's likely that this price will be beaten by dealers. Acorn and Xemplar usually release drivers for Canon printers more promptly than for any other brand, so there is a good chance the BJC-50 will be supported soon. Contact Canon UK on tel: 0121-680 8062.



Cumana supports Yamaha CD recorder

Cumana have announced that their CD-R/RW mastering package, called *CDBlaze* now supports the latest Yamaha CRW4260 CD-RW drive. This is in addition to other currently supported drives, which include the Philips CDD2600, Ricoh MP6200S, Plasmon CDR480 and Panasonic/Matsushita CW-7502.

Cumana expect to add further drives to the list later this year and invite enquiries from users of drives not currently listed. A free trial version is available to download from the Cumana website and there is a trade-on offer for existing CD-R users who want to upgrade to *CDBlaze*.

The *CDBlaze* website is at http://www.findme.co.uk/cdblaze/. Cumana, which is part of the Cannon Computing group, can be contacted on tel: 01279 730900, fax: 01279 730809, e-mail: sales@cumana.co.uk or on the Web at: http://www.cumana.demon.co.uk/

Scottish user group?

Robert Todd of Todd Education Computer Services and the organiser of the annual Acorn Scottish Show, is proposing that an official Scottish Acorn user group be formed. He explained: 'As the organiser of the Scottish show I am becoming more frustrated at the lack of an organised group in Scotland, so I have decided to offer people the chance to do something about it.

'My proposal would be to have a single parent group which would be involved in supporting and co-ordinating activities across the country, such as the Scottish show. Further to this and due to the distances involved I would look to create localised sub-groups, say Glasgow, Edinburgh, Dundee, Dumfries and Inverness.'

The aim would be to have monthly local group meetings and national meetings two or three times a year. Local meetings would allow groups of users to get together, hopefully with local dealer support involving product demos, training sessions and more. National meetings would be used to attract software and hardware developers from across the UK to demonstrate and promote their products.

Todd asks: 'To operate this I need a number of things from you the users. Firstly I need to know what the interest in such an organisation would be. So if you would like to be part of this then e-mail me your contact details. If you would be interested in helping organise a local group or to be part of the overseeing body then mention this in your e-mail.'

Todd says that his role in all of this will be to co-ordinate the setting up of the groups. Once this task is completed he would encourage the groups to elect a chairman and committee to oversee the day-to-day running of the national group. Bob Todd can be contacted at tel: 0141-644 4952 or via e-mail: rtodd@tecs.co.uk

news



Kodak get in the picture

Kodak have introduced a digital camera which has snatched back the coveted title of 'highest resolution' camera from the remarkable Olympus Camedia 1400. With its 1.6 million pixels, the Kodak DC260 can record five times as much detail as a typical 640x480 pixel camera. For the first time, a picture can be reproduced at 300dpi if printed at traditional 'enprint' size - 5in x 3.5in - though these days the usual print size on offer is more likely to be 6in x 4in.



The 300dpi threshold is important because you need this sort of resolution at the required size for standard quality repro in, for example, magazines. Digital artefacts in pictures taken using the DC260 should be at a bare minimum when taken using the camera's maximum resolution. Indeed, magazines which have reviewed the DC260 have raved about its picture quality.

There are also other goodies – unlike some cameras which take several seconds to re-set before you can take another picture, the DC260 can shoot a 'burst mode' of up to a dozen frames in one second and there is a time lapse option as well. You get an optical viewfinder as well as an LCD preview screen. The camera is unique in having its own script programming language and it can communicate wirelessly via IrDA and supports the up-and-coming USB (universal serial bus) communications hardware standard.

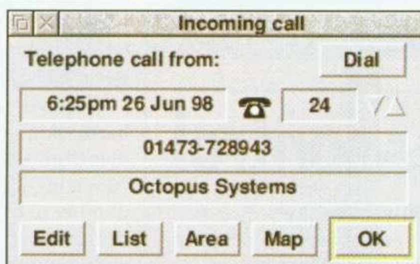
The DC260 also has a 6X digital and optical zoom lens (the cheaper DC220 makes do with just 1 million pixels and a 4X zoom). At £899, the DC260 is not immediately affordable for everyone, but given time we'll all be hankering after one. The DC220 is priced £699. Both models are TWAIN enabled and images can be downloaded as JPEGs as well as FlashPIX and EXIF formats - the latter enabling text and audio to be stored with a picture.

Acorn developers have found it difficult to get technical data out of Kodak vital for their picture downloading software to be compatible with earlier Kodak cameras. Let's hope Kodak have come to their senses with the new cameras and made life easier for Acorn users. Contact Kodak on tel: 0800 281487.

Look who's calling 2

Octopus Systems have announced the latest version of their *Caller Display* package which tells you who is calling when the telephone rings and doubles as a 'personal assistant' to help you handle telephone calls more efficiently.

Supplied with either a CLI (calling line identification) box or a Pace 56K modem, the software instantly opens a window showing an incoming caller's telephone number and also the caller's name if it has been previously entered.



When a call is received it will also: speak the caller's name in case you are away from the computer (this is an optional extra), open a file containing notes of previous conversations, show the caller's location on a map, stop the CD drive if it is playing a music CD and it will power-up your computer's monitor if it has powered down. It will even link to other programs like *Prophet 3* to automatically open the relevant account record if the caller happens to be a customer or a supplier.

Advantages include being able to have your customer's details on the computer screen as they greet that customer's call. At home, you can screen calls or surprise friends with 'unusual' greetings! All incoming and outgoing calls are logged and timed and a simple click will list all previous calls to or from a particular number, together with the duration of each call.

Caller Display 2 is supplied with a small CID1 unit or a Pace 56k voice/fax modem, which is now V.90 enabled, both of which plug into the computer's serial port. Incidentally, Pace modems remain the only modems available which support the BT version of calling line identification. The CID1 version logs outgoing calls dialled from any telephone extension, while the Pace version logs calls dialled via the modem.

The Caller Display service is available on most telephone lines even if you don't have the 1471 service and costs £4 per quarter from BT. The CID1 unit & Caller Display software is priced £99 and the Pace 56K modem version is £169. *Speak* software is £20 and, if you are short of serial sockets or you have an old A300/400 Archimedes, Octopus can supply Atomwide's triple serial port for £117. All prices include leads and VAT, but not P&P, which adds a further fiver to orders.

Software upgrades from version 1 are available for £29 and they offer all of the features listed above except for the outgoing call logging and duration timing as newer hardware is required for these features. For more information, check out the Octopus website at http://www.octosys.co.uk/ or phone 01473-728943, fax: 01473-270643.

StrongHelp 2.60 released

The beta stage has been successfully completed and the release version of *StrongHelp* version 2.60 is now available for download from http://home.eunet.no/~guttorvi/strong.html

The biggest change is that it is now easier to organise multiple manuals in the !Manuals directory, which can now be organised as sub-directories. There is also a new manual for HTML reference, called StrongHTML.

Acorn fans in France

ARMada is not a Spanish naval expeditionary force, but it is the name of what is claimed to be France's biggest group of Acorn fans. If you want to find out more about ARMada, they have a Web page containing the ARMada's French mailing list. It is at http://www.liste.armada-fr.net.

Meanwhile, don't forget there is another group of Acorn fans in France. They call themselves Fraug, the French Acorn User Group. They have just released a patched version of *RMCompare* for RISC OS 3.5+ from Philippe Donsback. Fraug's website, which is at http://www.mygale.org/~fraug, contains a substantial library of Acorn software available for download. You can e-mail Fraug at: fraug@mygale.org

Voyager font clash fixed

A problem caused when Fabis *EasyFont Pro* and Argonet's *Voyager* Internet suite are used together has now been fixed with the release of version 4.13c of *EasyFont Pro*.

The update is available from the Fabis website at: http://www.fabis.demon.co.uk/

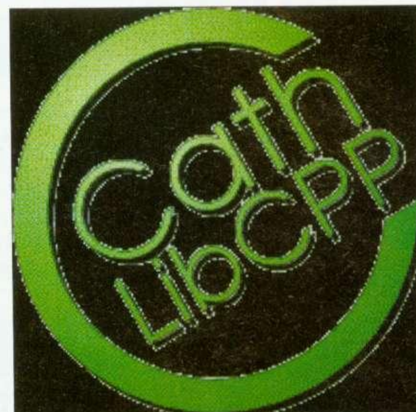
PICsuite upgrade available

Jaffa Software are requesting that all purchasers of their *PICsuite* hardware/software solution for programming PIC microchips contact them to ensure they have the latest version.

Jaffa Software can be contacted via e-mail: info@jaffasoft.co.uk, phone: 07961 394228, or you can look at their website at: http://www.jaffasoft.co.uk/



Free Acorn C library



An implementation of the Standard C++ Library, called *CathLibCPP*, for Acorn's Cfront compiler is now available for free to programmers. This C++ library was written by Miles Sabin who, as he is no longer programming for RISC OS, has decided to make it available free of charge, although he cannot offer any active support for it himself.

It may be freely used and copied providing suitable copyright messages are included in all copies. Full details of the conditions of use are included in the documentation.

CathLibCPP is an implementation of the Standard C++ Library designed specifically for Acorn's version of Cfront. It adds a degree of exception handling and runtime type identification (RTTI) capability to Cfront and one of its features is the aim to reduce the amount of code volume of compilations caused by the Standard Template Library (STL).

CathLibCPP should be used in conjunction with Acorn's release 5 C++ compiler, Jonathan Coxhead's *OSLib* (release 5.1), and David Daniels's *Drlink* (version 0.34 included). The Acorn C User Group have kindly hosted the distribution of *CathLibCPP*, which is available for download from: http://www.accu.org/acornsig/public/cathlib/ Alexander Thoukydides can answer questions about *CathLibCPP* and he can be contacted via e-mail at: alex@thouky.tcp.co.uk

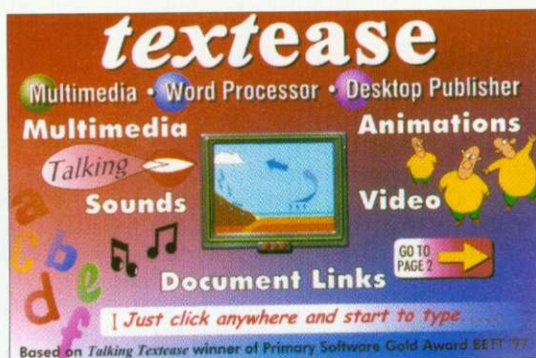
Textease gets Web-enabled

Documents created in *Textease*, the word-processing and DTP package from Softease, can now be conveniently converted to HTML (HyperText Markup Language), the page description format of the World Wide Web.

Traditionally, to create Web page designs of any complexity, you needed to program the design using unfriendly HTML commands and syntax. Now, virtually at the touch of a button, *Textease's* new HTML Reader/Writer can both convert existing documents into Web pages and convert Web pages to *Textease* format.

Both text and graphics can be converted together and you can create links between separate pages as well. HTML Reader/Writer costs £35 + VAT and is compatible with the most common variants of HTML (version 3.0 and later).

Softease can be contacted on tel: 01332-204911 or fax: 01332-609224, e-mail: sales@softease.co.uk, WWW: http://www.softease.co.uk



User-friendly computer control

Focus IT have introduced a new education package for using Acorns in control and measurement applications. *Visual Control Learning* is described as a completely new and very easy-to-use approach to the topic of measurement and control and requires no knowledge of computer programming.

Instead, *VCL* has a graphical user interface which users can use to drag and drop components to build up a graphical representation of the task. You don't have to buy expensive control boxes either, as *VCL* has a built-in simulator which is automatically configured by the program as you develop a project.

Hardware control is supported by serial Deltronics control boxes and Focus IT say they will eventually have their own low cost control boxes which will be designed to maximise the *VCL* design concept.

Two versions of *VCL* are available. *Visual Control Learning* is the full program which will control up to 72 inputs and outputs, 36 analogue-digital channels, nine timers, nine counters, a real time clock and audio. *VCL-Lite* will control up to eight inputs and outputs, four analogue-digital channels, one timer, one counter, the real time clock, and audio sample.

A single user copy of *VCL* is priced £69.95, and *VCL-Lite* is £39.95. A fully working, non-saving demonstration version is available – to obtain this contact David Atkins at Focus IT on tel: 01274-618774, or e-mail: david@focus-it.co.uk

Fight fire with fire

Junk e-mail, or so-called 'spam' is an increasing problem. Mike Williams (mike@econym.demon.co.uk) has been devising counter-measures for some time and has now released *Junkmail2*, a shareware anti-spam application which is being distributed from his website at http://www.econym.demon.co.uk/junkmail/

Junkmail2 is a program for generating complaints about e-mail spam. When you receive an e-mail spam, you can drop it into *Junkmail2*, which interprets the message header, determines the best person to complain to, and places the complaint in your outgoing mail queue. Improvements in *Junkmail2* include simpler set up, suppression of complaints to your own forwarding service and domain aliasing service for relaying the spam.

Evidence that Mike has thought very hard about how best to tackle spam is plentiful. Other features include a new "domain" algorithm, a reduction in the number of complaint destinations, confidence scores on complaint destinations, new Ant transport, which doesn't need its own special templates and configurable maximum size for the quoted message. *Junkmail2* also supports X-Trace:, X-complaints-to:, Sender: and Return-Path: headers.

It detects Web page URLs and possible reply addresses in the message body and user-entered complaint destinations. It's also smart enough to detect that messages can't really be from Hotmail if there's no X-originating-ip: line. For more information, contact Mike via e-mail – but please, no junk e-mailing, he knows how to deal with it!

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2 superb scanner deals

Got a BJC4300? Want a scanner?

If you wish to add scanning capability to your Acorn (needs bi-directional printer port) and already have a BJC4300 why not add the following: Scanner head, Imagemaster, TWAIN driver & Sleuth 2 OCR software. Special price - £135.00

Plustek Optic Pro

The Optic Pro scanner has recently been launched into the PC market to great acclaim - and for good reason too. It's a 30 bit, A4 scanner and it's cheap too! It was used to produce the Sleuth 3 image below from a RISC User advertisement.

BEEBUG can supply the Optic Pro, with Imagemaster, Twain & Sleuth 2 for £135.00

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SLEUTH 3

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Ovation Pro Special Offer

With every copy of Ovation Pro purchased until 1st September 1998 we'll offer the RISC User Fonts Pack for just £20 inclusive [instead of £50 inclusive]. We truly believe that Ovation Pro is the best possible system for desktop publishing on Acorn RISC OS systems, and as such now use it to produce everything from our magazine advertisements to RISC User magazine.

Ovation Pro DTP software - £193.88
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Want a Phoebe 2100?

We're now taking deposits for Acorn's new computer, due September. £100 inc VAT (which will be banked) will secure your position in the queue for the new Risc PC II!

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All prices and specifications are subject to change without notice. E&OE. Carriage on large hardware is £11.75; carriage on most software titles is £2.20; carriage on Ovation Pro is £4.20.





news

Acorn PR gets in a lather

The link between shampoo and computers isn't exactly obvious, but *Mail on Sunday* readers may have spotted a competition with 10 Acorn computers as prizes, sponsored by shampoo brand, Wella, in the August 2nd edition. The prominent display of Acorn logos and pictures in a best-selling national paper is a direct result of the recent strengthening of the Acorn Workstations Division marketing team, says Chris Cox, who heads up that division.

In fact, the promotion was so Acorn-positive that it's actually difficult to notice that Wella shampoo is involved without looking quite hard. Sources close to *Acorn User* suggest that Wella were not best pleased with this, though to enter the competition you have to do a bit of homework on their kids shampoos, like Vosene. Acorn say the tie-up with Wella is also expected to continue with a competition on Teletext during September.

Slapstick humour

Apparently, there is a Windows game called *Pie Gates* in which you throw custard pies at the Microsoft co-founder and multi-billionaire. A RISC OS version has been produced, so if you want to work off those nasty anti-Microsoft feelings you can throw RISC OS custard pies at Bill Gates.

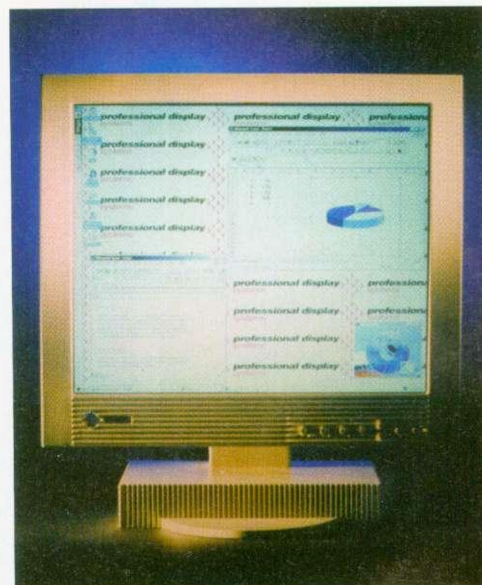
Amusingly, the Windows version of the distribution file is almost seven times larger than the RISC OS archive... To find RISC OS *Pie Gates*, point your browser at http://members.tripod.com/~microsloth/ and go to the 'Computing' section, then 'Games'.

German Acorn interest

Jan Unger (e-mail: janunger@jurs1.jura.uni-osnabrueck.de) has written to remind us all that there is an Acorn-friendly German interactive media design team called Silicon Bay. The team produces advertising and other graphic design services.

Jan says: "We are strongly committed to the Acorn platform and that's why we have two exclusive-2-acorn-users websites online." These are at: http://www.digital-guru.de/aware and http://www.digital-guru.de/stage2 – the latter being largely in German. Silicon Bay's corporate website is at http://www.digital-guru.de/silicon-bay

Monitor makes it big in the City



Eizo's new FlexScan L66 is the company's largest LCD monitor yet, with a diagonal measurement of 18 inches, which is nearly the real viewing dimension of a 21 inch conventional CRT monitor. Nearly 2,000 L66s have already been sold to companies in the City for use in dealing rooms.

The large size of the screen, combined with its clarity, makes it ideal for viewing information from a medium distance. At £3,269, we're not going to all rush off our orders for an L66 just yet. However, it was only a few years back when 21in CRTs cost nearly this much and entry-level LCD monitors are now hitting the £500 mark. The days of that huge, heavy and radiation-emitting glass tube you sit in front of with your computer are truly numbered. Contact Eizo on tel: 01483 719500.

ARM's rapid growth

In ARM Ltd's second quarter figures for 1998, ending June 30th, total revenues amounted to £9.9 million, representing a 54 per cent increase from £6.5 million in the same period last year. Total revenues for the half year ending June 30th 1998 amounted to £18.6 million, an increase of 59 per cent from total revenues of £11.7 million in the first half of 1997.

Service revenue was static, but product revenues for the second quarter 1998 amounted to £8.3 million, an increase of 77 per cent from product revenues of £4.7 million in the corresponding period in 1997 and represented 83 per cent of second quarter 1998 revenues.

Product revenues for the half year amounted to £15.3 million, an increase of 73 per cent from £8.8 million in the first half of 1997. Operating profit for the quarter was £1.8 million or 18 per cent of revenues compared to £1.0 million or 16 per cent of revenues in the same period in 1997.

For the first half of 1998, operating income was £3.4 million or 19 per cent of revenues compared to operating income of £1.5 million or 13 per cent of revenues in the first half of 1997. Commenting on the results, ARM supremo, Robin Saxby, said: "We have had a strong half year with the addition of three new ARM7TDMI licensees in the first quarter of 1998 bringing the total number of partners to 29. We have also had two existing partners taking up ARM 9 licences, one in the first quarter of 1998 and one in the second quarter of 1998, making six in total. We also concluded our licence agreement with Intel on StrongARM in the second quarter of 1998."

Other recent ARM wins include contracts with Cirrus Logic and Lucent Technologies, plus a more recent announcement that NEC will use ARM cores in a new memory controller technology. Saxby also revealed that in Q.1 1998 some 5 million ARM-based chips were produced and the figure for the second quarter was 'substantially' up on that figure. Acorn's financial statement is due next – though that is likely to be rather more sober reading, except for the bit about dividends from...ARM Ltd!

Surprise departure from Sherston

Sherston Software, a leading light in Acorn educational software development, has revealed that its managing director, David Eccles, has decided to leave the company and join Granada Learning and SEMERC. A statement revealed that Eccles' departure was 'something of a surprise' especially as he was considered a central member of the Sherston 'family'.

Company chairman, Bill Bonham, explained that Eccles had moved on for very understandable family reasons. An official statement suggest the news would be treated as a positive opportunity: "Sherston have taken a very positive view of the move and plan to use it as an opportunity to make some much needed strategic changes within the company, beginning with the appointment of the current financial director, Russell Mabon, as the new Managing Director.

"There will also be changes to the roles and responsibilities of the other directors and some existing staff. Strategic plans for new appointments have been brought forward and Sherston expect to be appointing several new staff in the near future in various areas to significantly strengthen the team."

news



Acorn World '98 dedicated graphics stand

At the coming Acorn World show a major step forward for Acorn graphics users will take place. For the first ever time key players in the graphics sector will join forces to present users with the complete design and publishing solution — from bitmap through vector to 3D modelling.

The four participating companies are Spacetech, Akalat Publishing, Alternative Publishing and the team behind Project Avante. Each company complements the other at every level allowing the development of packages that satisfy the needs of the graphics market.

Making a stand

The graphics stand is one of the largest at the show which allows for the very unique feature of a mini theatre which will be used for the singular purpose of advancing the level of graphics on the RISC OS. Presentations which will run throughout the three days of the show will be informative and interesting, allowing publishers, designers and artists an insight into the use and creation of top graphics packages such as Project Avante.

Apart from the theatre, there is also ample space for one-to-one demonstrations and advice. If you've always wondered how to perform a certain graphics task, an informed answer won't be far away. Names that people will have become familiar with over the last few years such as Mike Williams of Akalat and Nicholas van der Walle of Astute Graphics will be there.

New releases

One of the most publicised releases at the show will be in the form of Project Avante, which represents the first major leap in vector graphics for around six years. It will be at this show that the pre-release version will be on demonstration and allow people to have a hands-on experience of its power.

Not only will it deliver all that has been promised in the past, but there are a few extras which will only be presented to the world for the first time on the Friday... along with its official name.

The other major new package on demonstration will be the latest version of *Photodesk*. Signalling continued development, *Photodesk 3* adds much needed layers to Acorn's most popular professional bitmap application. This one feature alone doubles the effectiveness of *Photodesk* and allows Acorn users to communicate with other professional programs of this type on other platforms.

Seeing is believing

This is your best opportunity to attend what promises to be the largest collection of Acorn graphics resources ever at one convenient stand. By witnessing all that you have read or heard about significant developments in this market, you will be able to make judgement for yourselves as to the relevance of the Acorn system for generating graphics in the real world.

New products/upgrades

Product	New features/product details	Price	Contact
Games Collection CD	* A selection of good games at low cost that will work on (almost) any machine direct from the CD	£7.90 inclusive	APDL Tel: 0181-778 2659 E-mail: info@apdl.co.uk
Special prices	* Price offers on memory, monitors, hard drives, CD-ROMs and more	Contact Q-tec or check out their website	Q-Tec Tel: 01429-890800 www.q-tec.demon.co.uk
Touchpad input device	* Mouse replacement * Operated by pen-style stylus (supplied) or tip of finger * Saves desk space * Cushioned wrist support pad included * For all RISC OS machines via STD's PS2Mouse or PS2Mouse+ adapters * Connects directly to the A7000 series (drivers provided)	Touchpad - £34.95 Only £29.95 if purchase PSMouse2 (£24.95) or PS2Mouse+ (£39.95) at same time	Stuart Tyrrell Developments PO Box 183, Oldham, OL2 8FB Tel: Orange 0976 255256 E-mail: info@stdevel.demon.co.uk WWW:http://www.stdevel.demon.co.uk
Quizmaster now with Replay movies	* Replay movies can now be incorporated into quiz files in QuizMaster - the multimedia app that allows the teacher to present multiple-choice quizzes on any subject	Update available from website	Xavier WWW: http://xavier.bangor.ac.uk/

Leeds LEA-ds the way

An Internet newsgroup discussion revolving around reports that education policy in Leeds was rebelling against PCs in favour of Acorn equipment has, inevitably, generated a great deal of interest. We contacted Xemplar, the official supplier of Acorn computes to the education market in the UK, to find out if there was any substance to the rumours.

The answer was a bit mixed. A spokesman explained: "Leeds LEA, I'm told, doesn't decide on one platform or cross-platform system for all of its schools. Each of the schools in the LEA makes its own decision about what ICT equipment it will buy. Xemplar are supplying some schools with cross-platform networks which utilise Acorns, Apples and PCs."

At least this LEA is enlightened enough not to invoke a blinkered policy of standardising on a single platform. If anyone knows of any other LEAs or schools who have retreated from a PC-only policy, please drop us a line.

Back to the Year 2000 question

As the crunch date of January 1st, 2000, rapidly approaches, Acorn are trumpeting the fact that they are the only personal computer manufacturer to have made clear statement that their users won't be tearing their hair out on that New Year's morning.

RISC OS has always had a Year 2000 compliant date system and Acorn are confident that any of their computers running RISC OS 3.1 or later will be unaffected by any Year 2000 problems. Older BBC Micros and even Electrons, perhaps, fitted with real time clocks, could have a problem and Acorn are actively investigating the risks and possible solutions.

Acorn's Chris Cox commented: "We have always built our computers to last, so there are still a lot of older Acorns in use. Unlike some organisations in this industry, 'upgrade' is not our automatic answer to every potential problem."

Contacting me

You can contact the news page by writing to me Ian Burley at the usual Acorn User address or by e-mail: aunews@idg.co.uk

Showroom open Mon-Sat 10-18.00hrs (All prices INCLUDE VAT) Carriage not included

Reduced Prices

RiscOS Computer Systems

1yr warr. **Carriage included on computers.** All machines are single slice. Backplane fitted to 10M/34M RiscPC

233MHz StrongARM now fitted to all RiscPC Computers.

Computer Model with	14" (Samsung)	17"(VMastr)	No Monitor
Acorn NC 16MB(10BaseT) with Mse/Keybd	£460	£700	£330
A7000+ 8MHD1.2Gb	£915	£1160	£785
A7000+ 8MHD1.2Gb+8xCD	£965	£1210	£835
A7000+ 8MHD1.2Gb+24xCD	£985	£1230	£855
RiscPC SA233 4MHD1.7 (SRP20A)	£1029	£1274	£899
RiscPC SA233 4MHD1.2+8xCD (SRP21)	£1040	£1285	£910
RiscPC SA233 4MHD1.7+24xCD (SRP20A+CD)	£1079	£1324	£949
RiscPC SA233 10MHD1.2+8xCD (SRP26A)	£1355	£1600	£1225
RiscPC J233 34MHD1.7+24xCD (SRP41)	£1455	£1700	£1325

RiscPC J233 includes the Acorn J233 Internet software pack comprising !Browse, RisCafe JAVA & OmniClient II

Add £50 to 14" (Samsung) prices for Samsung 15" Monitor instead.
Add £25 to 17" prices for VisionMasterPro instead of VisionMaster

Check out the amazing savings on the following options when you purchase a RiscPC computer.

Acorn 486DX-100 MHz PC Card	**£58**
Acorn 5x86-100 MHz PC Card	**£146**
Acorn 28.8k Internal Modem	**£58**

(A backplane for the modem will be included free of charge for the SRP20A)

Receive a discount of £200 when you Trade-in ANY computer including BBC Micro's, Electron or XT PC's etc when you purchase a RiscPC SRP26A or SRP41 RiscPC.
Interest Free Finance on Acorn computers - NO deposit & 6 interest free monthly payments. Loans from £700(min) - £3000. Subject to status.
You must be a member of Acorn Clan to qualify for the above offers, £15 to join. The above offers are valid from 1st July - 30th September 1998.

3Com ISDN LAN Modem £325c

Connect up to 4* computers[2] to the Internet with just ONE single ISDN dial-up[3] internet account!

This amazingly easy to use unit is suitable for RiscOS, PC, Mac & Unix computers and compatible with BT ISDN/HomeHighway services. It provides;
- 128kbps Multilink PPP ISDN with compression & PAP/CHAP security.
- A FOUR* port 10BaseT Hub for networking to each computer[2].
- TWO analogue telephone ports for standard telephones, faxes & modems.
- DHCP Server for automatically configuring computers for the network.
- Built-In Web server for configuration & diagnostics from a conn'd computer[1].
- Built-In DNS server.
- Flash upgradeable for user-installable future firmware upgrades.

Ring us now for further information.

* - Expandable to support up to 10 Computers. [1] - A JavaScript enabled Web browser is required for access to Web Server. [2] - Each connected computer must be equipped with a 10BaseT network card. [3] - ISDN line and ISP account not included. NOTE - PSU, Network cabling for ONE computer and ISDN Cabling is included with the unit.



£1750 Inc.
(without monitor)
PLUS an incentive which will be decided at the time of supply
Minimum Specification
233MHz StrongARM, 32Mb SDRAM, 4Mb EDO VRAM, 6.4Gb HD, 32x CD-ROM, 4 PCI slots, 3 Podule slots, Mini Tower Case, RiscOS4.
We are taking advance orders now. A deposit of £100 is required which is registered with Acorn Computers Ltd.

JazZip Tools £15a
(free if purchased with drive)
JazZip provides you with a complete set of RiscOS tools for Jaz/Zip drives which are equivalent to those provided with the PC DOS utilities that are provided with Iomega drives. Requires a driver for parallel use. Features include;
- Standard password protection of discs.
- Lock/unlock zip/jaz discs with/without passwords
- Unlock zip/jaz discs until next ejected from drive.
- Low Level format zip/jaz discs.
- Initialise zip/jaz discs for RiscOS or DOS.
- Unprotect the Tools disc

New Software Releases
Abuse for RiscPC/A7000 £23a
- 8Mb RAM, 10Mb HD space, VGA

Ankh for RiscOS £23a
- RiscOS >=3.1 with 4Mb RAM, VGA & CD-ROM

DOOM Trilogy for RiscOS £30a
- A5000 - RiscPC with 8Mb RAM & CD-ROM

Frak for RiscPC/A7000 £14a

Syndicate+ for RiscOS £27a
- A5000 - RiscPC with 8Mb RAM & CD-ROM

Mail Order - 0161-474 0778 (All prices INCLUDE VAT) The lowest prices without compromise

Monitors (Carriage £10)
Older computers will require an adaptor £12

Samsung 14" Monitor £130
FST, 0.28" dp, 1024x768, 30-54kHz & pre-sets.

Samsung 15" Monitor £180
High spec FST Tube with 0.28" dot pitch

Ilyama VisionMaster 17" £375
High spec FST Tube with 0.26" dot pitch

Ily VisionMaster Pro 17" £400
Very High spec Diamondtron tube, 0.25" stripe

Memory
Following prices strictly whilst stocks last.

RiscPC/A7000 SIMMS

16Mb	£20a	32Mb	£35a
64Mb	£110a	128Mb	£Calla

RiscPC VRAM

1Mb 2nd user	£35a	2Mb	£79a
1-2Mb u/g (exchange)	£50a		

Call for details of memory for other models.

Hard Drives/Interfaces+
Carriage: a=£2, b=£6, c=£8

Hard Drives

Quantum 2.1Gb IDE	£105b
Quantum 6.4 Gb IDE	£160b
IBM 540Mb SCSI	£120b
Cheetah 4.5Gb SCSI	£520c
Cheetah 9.1Gb SCSI	£830c

10,000rpm Cheetah drives useful for VideoDsk

Interfaces/Cables

Simtec IDE Interface £55a
Supports up to 4 AT devices including Hard Drives, CD-ROM drives and zip drives.

Cumana SCSI II £155b

CD-ROM Drives
Internal CD-ROM Drives

Panas'c 24xCD **ATAPI**	£60c
Toshiba 32x CD **SCSI**	£100c
Cable & Fitting Kit	£10a

Compatible with RiscOS 3.60 or greater.

External CD-ROM Drives

Panas'c 24xCD **ATAPI**	£120c
Toshiba 32x CD **SCSI**	£160c

External Drives require a suitable Data cable.

I³ Networking (Carr. £6)

A30X0 EtherLan 102	£130
Archi EtherLan 514	£130
RPC/A7k EtherLan 602	£110

Add £17 to above prices for Access+.

RiscPC Upgrades
RiscOS 3.70 Upgrade £58a
- Above is suitable for RiscPC's only.

233MHz StrongARM	£275b
586-133 PC Card (512kb)	£360c
PC Pro (without PCExchange)	£38a
Windows '95 CD (Full)	£80a

Can be installed without any prev PCOS pres't

2nd Slice with PSU	£116c
2nd Slice without PSU	£90c
YES 16 bit Mozart Card	£70a

Printers (Carriage £8)

Canon BJC-4300	£125
Canon BJC-4550 (A3)	£250

- Includes Free PhotoReal Cartridge.

Canon BJC-620 (720dpi)	£215
BJC-7000 (1200x600dpi)	£250
Epson 400 (720dpi, 3ppm)	£149
Epson 600 (1440x720dpi)	£189
Epson 800 (1440x720dpi)	£270
HP LaserJets 6L (6ppm)	£295
HP LaserJets 6P (8ppm)	£585

Zip/Jaz Drives
Include Our JazZip tools
- £17 if purchased separately

Int SCSI zip drive	£115c
Ext SCSI zip drive	£115c
Ext Parallel zip drive	£115c

- add £29 for RiscOS Parallel Driver

100Mb zip cartridge	£11a
Pk of 6 zip discs+caddy	£65b
Int 1Gb jaz drive (3½")	£220c
Ext 1Gb jaz drive	£260c
1Gb jaz cartridge	£70a

Carriage: a = £2, b = £6, c = £8, d = £10

Modems (Carriage £8)

Budget 56kVoice (Flash)	£79
Pace 56k Voice (Flash)	£135
Pace 56k Solo (Flash)	£185

- The Solo modem can save fax & voice
- messages without a computer attached!
Modems come with a 9-25 PC wired cable.
A3000/Archimedes req'r an Archi wired cable.

ANT Internet Suite II	£110a
Dual Serial Card	£104b

9-25 Archi or PC Wired Modem Cable £12ea.a
3-way Serial T-Switch (incl. comm. cable) £32b

Portable Computers
Carriage: a=£2, b=£6, c=£8

Pocket Book II (1Mb)	£195c
Psion 5 4Mb RAM	**£395c**
Psion 5 8Mb RAM	**£425c**

- includes PsiWin Link

AutoRoute Express £30a
- one of the best packages for the PB/3a

PsiRisc £67a

A-Link	£59a		
Parallel Link	£34a	PsiWin PC Link	£80b
3/3a Mains Adap.	£18a	5 Mains Adaptor	£20b

Scanners (Carriage £8)
ScanLight Video 256 £75
- suitable for A3000-A4000 (Only Two left)

Epson Colour Scanners
Include !TWAIN & ImageMaster for RiscOS. Bundles include software for PC's/PC Cards

GTx-5500 SCSI bundle	£265
GTx-9500 Para bundle	£615
GTx-9500 SCSI bundle	£645

Hardware Upgrades

24i16 Card (1Mb)	£450b
DMI50 Dual Midi Card	£138b
DMI50XGS Midi/Synth	£335b
Dual Serial Card	£104b
FPA for 25MHz ARM3	£67a
Joystick I/F (Not RiscPC)	£20a
Logitech Mouse (Acorn)	£29a
Movie Magic (1 only)	£100b
- Includes two VideoCD films	
RiscTV Card (Irlam)	£285b
RiscTV Keying Module	£46a
RiscTV Teletext option	£45a
Scart Cable (9 or 15 pin)	£12a
Serial Upgrade (A3000)	£27a
100W Stereo Speakers	£20c
Videodesk (Irlam)	£800b
- one only, ex-demo	

Books (No VAT)
Carriage: a=£2, b=£6, c=£8,

Acorn RISCOS3 PRM's	£99.95c
Acorn Volume 5a PRM	£29.75c
Acorn BBC Basic VI Guide	£19.95b
Acorn RiscPC Tech Ref Manual	£49.95c
Budget DTP (Dabs)	£5.00a
'C' A Dabhand Guide (Dabs)	£5.00b
RiscOS 3 First Steps (Dabs)	£5.00a
Wimp Programming for All (Beebug)	£10.95a

CD-ROM Software

Browse (Acorn)	**£36.00a**
RisCafe (JAVA)	**£36.00a**
ArtWorks on CD (CC)	£105b
Childrens Micropedia (Kingfisher)	£72b
ClipArt CD 1/2 (CC)	£21a each
Doom Trilogy (RiscPC only)	**£30a**
Dune II (Eclipse)	£32a
Hutchinsons Encyclopedia 92 for RiscOS	£10a
Hutchinsons Encyclopedia 97 for PC only	£10a
Musical Instruments (MS)	£50a
RiscDisc Vol 1, 2 or 3 CD	£12a each
Simon the Sorcerer CD	£32a
The Way Things Work (DK)	£50a
TopicArtCD (DTP)	£10a
TOTS TV CD	£a
Typography Font CD	£30a
Ultimate Human Body (DK)	£50a

Games (Carriage £2)

Abuse	**£23a**
Alone in the Dark (Krisalis)	£32a
Birds of War (4D) 2Mb	£25a
B H P (TBA)	£28a
Break 147/Superpool (4D)	£25a
Crystal Maze (Sher) Floppy £28 / CD	£32a
Cyber Chess (4D)	£16a
Drifter (4D)	£25a
Dune II (floppy) (Eclipse)	£30a
Fire & Ice (Times Warner)	£23a
Frak	£14a
Holed Out Compendium (4D)	£16a
Krisalis Collection	£28a
Lotus Turbo Chall2 (Kris)	£26a
Magic Pockets (Reneg)	£26a
Real McCoy 2/3/4/5 (4D)	£25a each
Saloon Cars Deluxe (4D)	£25a
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Simon the Sorcerer 2Mb	£27a
Spobbleoid Fantasy (4D)	£27a
Starfighter 3000 (Fednet)	£28a
Stunt Racer 2000 (4D)	£25a
Syndicate+	**£27a**
Virtual Golf (4D) 2Mb	£25a
Wolfenstein 3D	**£10a**

- Now compatible with RiscPC+StrongARM

Printer Consumables
Carriage: £2 for Cartridges, £8 for Toner

BJ-10 (BC-01)	£16	BJ-300 (BJI-642)	£14
BJ-210 (BC-05)	£25	BJC7000 (BJ-60)	£25
BJ-200 (BC-02)	£16	BJC7000 (BJI-61)	£18
BJ-240 (BC-06)	£Call	BJC7000 (BJI-62)	£27
BJC-600 Series		**BJC-4000 Series**	
BJI-201HCbk Black	£9	BCI-21Bk Black	£8
BJI-201bk Black	£6	BCI-21C Colour	£15
BJI-201C/M/Y	£8 ea.	BC-20 Fast Black	£23
BJC-800		BC-21 Cartridge	£32
BJI-643 Black	£18	BC-22 Photo Cart	£39
BJI-643C/M/Y	£23 ea.		
HP DeskJets-500 ser.		**HP DeskJets 600 ser.**	
Mono	£21	Mono	£22
Colour	£23	Colour	£25
Eps Stylus Black	£14	Eps Stylus II Black	£19
Eps Stylus Colour	£23	Eps Stylus II Col'r	£24
Laser Toner		C3903A (LJ5P)	£64
EP-L (LBP-4)	£64	HP92274A (LJ4L)	£54

Applications

ANT Int. Suite	£110a	ArcFax	£32a
ArtWorks (CC)	£104b	Card Shop	£23a
Compression	£31a	DataPower2	£165b
Disc Rescue 2	£43a	DrawWorks Des	£27a
Eureka v3	£105b	FastSpool+	£18a
FireWorkz Pro	£165b	Font FX 6	£30a
HTML Edit 3	£47a	ImageFS2	£43a
Impression Style	£83b	Impr. Publisher	£136b
MacFS	£105a	MacFS Lite (CC)	£51a
MidiWorks Light	£30a	MovieFS	£29a
Mr Clippy (iSV)	£19a	PC Pro v2	£38a
PC Pro v2 + Exch	£46a	Personal Acc'ts	£45a
PhotoDesk Light	£129b	PsiRisc	£67a
Sibelius 6	£100b	Sibelius 7 Stud	£349b
Sibelius 7	£699b	SparkFS	£24a
StrongGuard	£24a	Web Design T'kit	£28a
X-Stich2	£28a	Win95FS	£39a

Educational (Carr. £2)
10/10 Series £14a each
Early Essentials (over 7), English (6-16yrs), French (8-16yrs), Junior Essentials (5-11), Maths (Number) (6-16), Maths (Algebra) (6-16), Maths (Statistics) (6-16), Maths (Geom'y) (6-16), Spelling (over 9), Essential IT, Geog.,

Fun School 3 (under 5, 5-7, or over 7)	£22a
Fun School 4 (under 5, 5-7, or over 7)	£22a
Maths Circus (4Mation)	£28a
Playdays (Gamesware)	£24a
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ONE WAY
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We Accept









Divine Nature interview

With the Revelation demo competition only a short time away and several new groups emerging onto the scene, I talked to Divine Nature about all things graphical.

***AU:** Why did you start the demo group?*

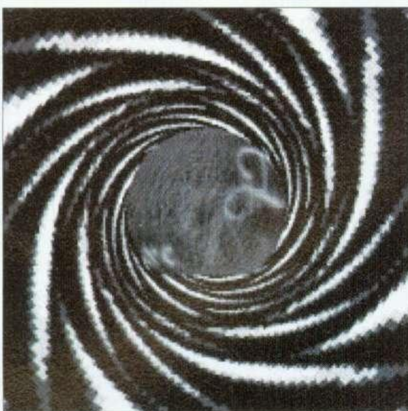
Xyra: I have always been fascinated by computer graphics. When I saw several demos after I'd got my Risc PC, I realised that I could probably code my own effects, and that is where the idea originally came from. Nothing happened for a while, but after Revelation '97 I started learning to code more seriously and, by the time Acorn World '97 came round, I had started work on *Eden*. At the end of the 1997 I formed Divine Nature to release the demo (not knowing about Rev98 then).



***AU:** Who is the driving force behind the group?*

Xyra: I first had the idea for the group and set it up originally on my own, but over time other people have joined. I started work on *Eden* before Divine Nature was formed and so have wanted to keep that as all my own work.

I am the only coder currently in the group (any other coders out there who want to join?) and so I am generally the person who gets things moving. Our next demo – which we've already started – will have work from the other members in it.



***AU:** What kind of demo background do you have?*

Xyra: I started coding about six years ago on an A3000, writing simple games and utilities. At the beginning of last year I graduated to a StrongARM Risc PC and it was about this time that I saw some impressive demos (the ones supplied on the StrongARM CD). Soon after, I got an Internet connection and downloaded loads more. I decided that I wanted to be able to write demos, so I set about learning Assembler which took me through the summer. Once I had learnt that I started work on *Eden* and, a few months later (about the beginning of this year), formed Divine Nature.

***AU:** Where do you see the demo scene heading?*

Xyra: I think that the demo scene will continue to develop. As computers get faster it will get easier to incorporate effects that were once (and some that still are) demo-only effects into games, so fewer people will be coding demos and most will go straight into game development.

***AU:** What are your views on supporting new Acorn hardware?*

Xyra: The Phoebe 2100 looks like an excellent computer and it may well revitalise the Acorn scene, but only if Acorn get their marketing right. It will probably not have too much of an effect on the demo scene because that relies on squeezing as much out of a computer as you can, and the current Risc PC still has some potential there.

***AU:** What do you think are the most important elements to demo design and coding?*

Xyra: A lot of imagination is required, so you don't just copy everyone else's ideas. You also need to have a good knowledge of coding and not be frightened to try out new ideas.

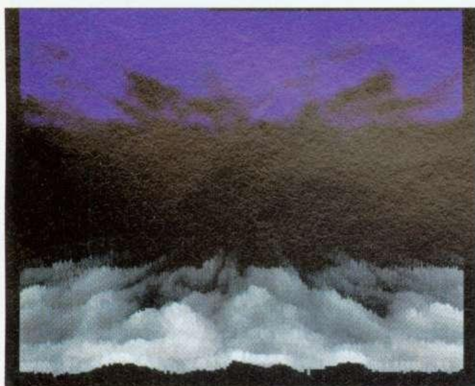
***AU:** What language do you work in?*

Xyra: *Eden* is coded entirely in Assembler (with some tables pre-calculated in BASIC), and so is our next demo – *Spawn*. Our forthcoming game engine is written in a combination of Assembler and C.

***AU:** Can you reveal any info about your forthcoming demo for Rev98?*

Xyra: You'll have to come and see it at Rev98! New screenshots will appear on our website (http://www.page-designer.com/dn/) occasionally though.

***AU:** Thanks Xyra. I'll certainly be there at Acorn World and I'll be putting together a full report for anyone who couldn't make it along.*





Sheet

Full-blown applications are not regularly released as PD software so I was very interested to try Tim Dilk's new spreadsheet program called *Sheet*. Tim has constructed a basic but very competent package that he intends to continue developing.

Installation is no more complicated than a drag to your hard disc, and a couple of mouse clicks on the application loads it to your iconbar. If you've used a spreadsheet before you'll be at home with the straightforward interface. Most features are provided via menus, but the most commonly used functions can be selected by using the *TechWriter*-style toolbar. In terms of usability, the program performs well, but one or two niggles remain here and there. It would be nice for the cell entry not to require a return key press, without which your entered cell details are not confirmed.

Functionality is always going to be a key area with an application of this kind and *Sheet* does well for a new application on the scene. The key requirements are here or are under development. Import and export supports native format, the essential CSV format and, of course, Drawfiles. The function editor is still not ready but will hopefully be finished by Tim soon.

The crucial thing about *Sheet* is Tim's pledge of further development. Tim says he will develop the program further if users are interested in using it and tell him features they want to see. So please take advantage of this opportunity and help Tim to develop an excellent spreadsheet application.

Sheet is Shareware with a registration of £10. An unregistered version can be found on Tim's website at http://www.compsoc.man.ac.uk/~tjd

Startpic

Startpic replaces your machine start-up banner with a sprite of your choosing. It is very easy to install and simple to use and comes with a rather smart Calvin and Hobbes picture. It'd be nice to have a funky effect on start-up instead though. You can find *Startpic* at http://www.foobar.co.uk/~utopia/

Recommended PD Libraries

- APDL, 39 Knighton Park Road, Sydenham, London SE26 5RN
- ARM Club PD Library, Freepost ND6573, London N12 0BR
- Five Star Marketing, 4 Shepherds Walk, Bushey, Hertfordshire WD2 1LZ

public domain

To the source

Checking out effect source code is a great way for up-and-coming programmers to learn the tricks of the trade. C++ source for a whole range of routines can be found on the Internet, but even better is a selection of Assembler sources from Divine Nature. Check out their water effect or the excellent bump mapping code on the group website at http://www.page-designer.com/dn/ Let's hope they add more soon.

Strongly updated

StrongEd has been updated by Guttorm Vik to provide better support for organising multiple manuals. There's also a new HTML manual and a new set of icons. Check out version 2.60 at http://home.eunet.no/~guttorvi/strong.html

Swipe

Swipe is quite a neat little utility that allows you to paste text from places you can't normally grab it from, like the title bars of windows for example. Simply move the mouse pointer over the ASCII you want, hold down Shift and Alt and a little pane appears with the grabbed text.

You can drag and select exactly which bit of the text you want and then drag the save icon to your destination. Almost genius, but if you're dragging to an open editor window you have to drag with the Adjust button, otherwise you end up pasting the path of the temporary text file rather than the text itself. *Swipe* can be located on the Web at http://www.ecs.soton.ac.uk/~tal197

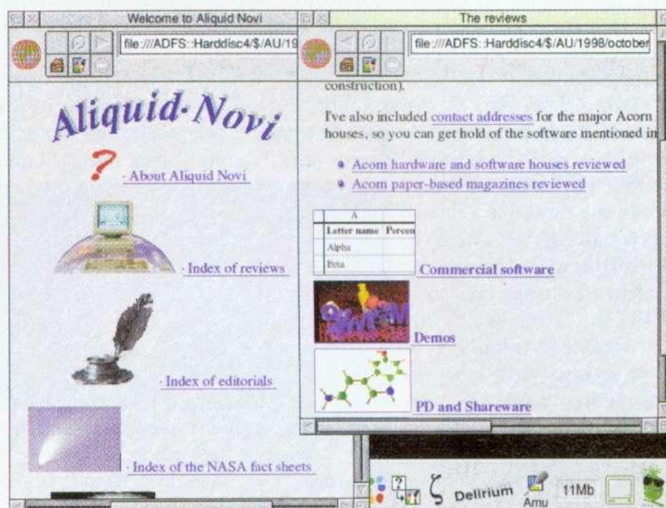
Contacting me

You can contact the PD page by writing to me, Paul Wheatley, at *Acorn User*, IDG Media, Media House, Adlington Park, Macclesfield, SK10 4NP.

Or preferably, by e-mail to aupdpage@idg.co.uk

Aliquid Novi

Disc magazines have been few and far between in recent months, so it's good see a new one on the scene in the shape of *Aliquid Novi* by Edmund Richardson. It's a rather unusual production and despite being well packed with information, I'm a little dubious about its quality.



Presented in HTML via a modified version of *Webite*, the design and presentation is a little suspect. The layout is fairly clear, but the graphics are rather dull and little effort has been put into making the magazine look the part. Never mind design style, there isn't even any anti-aliasing on the magazine's title sprite.

The content is better and features a range of articles either about the Acorn or centred on the magazine's theme – science fiction. Quite a large content of the magazine has been put together from material on the Net, but a number of the articles are by the magazine author. The reviews section covers a few commercial titles and a bigger range of PD and demos, but the material covered is generally very old.

Editor Edmund Richardson comes across in his articles with a very strong opinion on most subjects and his lack of accuracy in some areas does tend to make this a little annoying. For example, in the demos section, Frederic Elisei's excellent image light sourcing code (some of which was featured on the AU cover disc) is criticised for lack of design and movement, when this isn't physically possible due to the pre-calculated nature of the effect. Even worse is the review of the Archiologics *Jojo* demo which completely slates an excellent production for no reason.

Stranger still is the 'Promotional Blurb' section that details what seems to be a collection of software projects the Editor is working on. One of which is a description of one of the most ambitious games I've heard of. Given the production quality of the magazine, I'm a little sceptical about the realism of these ideas. I really wasn't sure if this section was a joke or not.

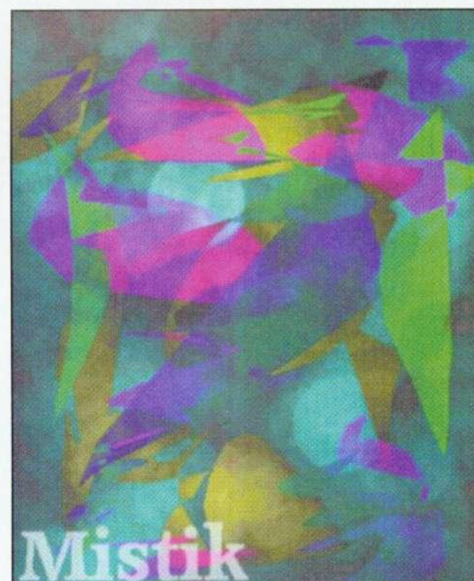
I hate to be too negative about productions of this kind. Having produced a disc magazine myself several years ago, I know how much work it involves, but I have to be honest and say that *Aliquid Novi* is not really my cup of tea. To formulate your own opinion, you can obtain the magazine from Edmund's website at http://www.bath.ac.uk/~masdr/edmund/homepage.html or contact Edmund by post at 20 Byron Place, Clifton, Bristol, BS8 1JT.

Ominoco

Ominoco is a little demo intro by scene newcomer, Idoru. It's a simple but neatly produced production incorporating hi-res graphics linked together with gamma fades. There are no real effects and it's a little on the dull side, but for a first release it certainly shows potential. For the next release I'll be hoping for some more stylish design, an effect or two and possibly some original music. Hang in there and keep working on it Idoru. *Ominoco* can be found on the group website at http://www.indi-net.demon.co.uk/inspiration/







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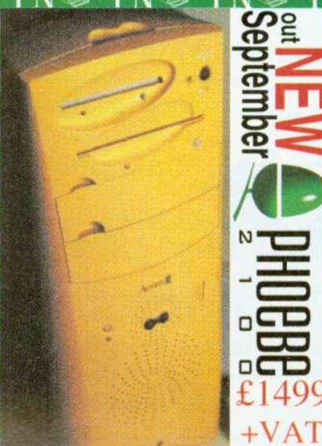
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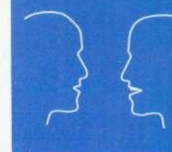
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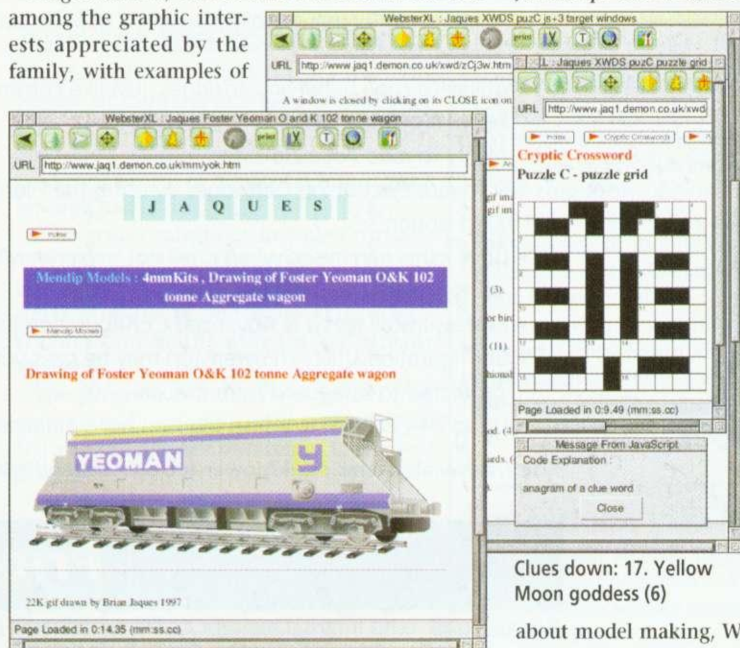
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All the world's a page

My misquotation of Jaques "Seven Ages of Man" speech in Shakespeare's *As you like it* is a neat way to describe the elaborate Demon website of Brian Jaques. His pages amply demonstrate the world of hobbies, habits, and labours of himself, his wife Lesley and his daughters Anna and Jemma, a family mixture of scientists and artists.

Six sections reflect the family's interests which Brian calls rather seriously, "Parent Topic Pages". Brian is fascinated by words, their derivation and interconnection and the Etymology section lists and describes selected families of words and their relationships.

Anglo-Saxon, Celtic and Mediaeval art are among the graphic interests appreciated by the family, with examples of computer graphics, illustration and textile design in the Art section. Brian and his wife are pharmacists in Bath, Somerset, and they produce some specialist therapeutic products described on the Pharmacy page.



A pretty good picture, on aggregate

Clues down: 17. Yellow Moon goddess (6)

Of interest to Web designers are the HTML Assist pages, where useful colour tables with hexadecimal values and names of the colours are shown. If you've ever wondered what PapayaWhip and Peru look like, you'll find them here if you're browsing in more than 256 colours.

Brian also features pixel ruler images in vertical and horizontal format, a transparent GIF shim image to help your empty table cells to look right, and illustrates the ISO Latin-1 HTML codes. *JavaScript* is used extensively in both the *JavaScript* Elements section and in Brian's other fascination; Cryptic Crosswords.

WebsterXL has been used extensively by Brian to design and develop his expertise in *JavaScript*, used to very good effect in his online treatise on solving and compiling Cryptic crossword puzzles. There are numerous ways to display the effects obtainable online, from just plain pages to Frames and *JavaScript* message boxes. If you can't view *JavaScript* yet, the course is available on disc with the *JavaScript* elements performed by BASIC programming.

You will also find out about model making, William A Wilson, brass flux and morphemes. Pictures of the Jaques family show that Brian appropriately, has a "beard of formal cut" as described by Jaques in the Seven Ages.

The Jaques website
http://www.jaq1.demon.co.uk

Seal of disapproval

While working to improve the Arcade BBS *Internet Gateway* software that allows BBS users to contribute to Usenet newsgroups, my friend Richard Sargeant directed me to the *Good Net-Keeping Seal of Approval*. This is a specification of minimal standards for decent Net-behaviour of news reader software, drawn up by Jeroen Scheerder based on earlier work by Ron Newman.

In these authors' opinions, most of the bad Net behaviour suffered by experienced Internet users has come about as more and more new users come online. Nuisances such as blank articles, mangled headers, and long quoted messages with just "me too" added by the respondent are typical, not to mention 'broken' threading of articles, a crime of which I'm afraid the Arcade BBS *Gateway* has been guilty.

Scheerder points out that old-timers are using relatively well-behaved software designed in the early days, while newer users employ more recent programs that tend to violate rules that come naturally to people used to the older better-behaved software.

You can look at what this is all about at the GNKSA website at http://www.xs4all.nl/~js/gnksa/. Amazingly, some rather prestigious pieces of software do not pass muster either, including *DejaNews*, the online archive of all newsgroups, and a version of *Pine*, many users' favourite online mail and news reader, and lastly *Netscape 4.0.2*.

We're doing our best to make our *Gateway* software even more compliant to the RFCs; the official documents that specify every aspect of Internet communication protocols, and less-irritating to the Internet die-hards who may be thinking that BBS users should stick to their modems. Our software still won't get the GNKSA, but we'll be in good company, at least for a while.

Penguin picks up

From the frozen lakes of Waterlooville, Hampshire, Penguin BBS emerges from the icy waters and spreads its wings. What? Penguins don't have wings? Er, well anyway, Sysop Luke Stutters has re-invented his BBS system running ArmBBS on a Risc PC 700 with a 33k6 modem using the Ringback method.

With Ringback, you let the number ring twice, hang up then call back immediately and the modem will pick up. Luke trawls the Internet for the latest versions of popular software, so you're sure to be able to pick up something of interest.

Penguin BBS
01705-254244 (24-hour Ringback)

First site

Adam Seeley is aiming to create one of the largest and most up-to-date set of links to Acorn pages on the Web. Visitors to Acornsite can view pages of categorised links as well as offering their own page URLs for listing.

The Acornsite search page offers submission of URLs to several search engines, and Adam's Site of the Month links to the best sites submitted. Acornsite is sponsored by water filtration specialists EPS, Aberystwyth (UK), a company that have used Acorn computers since 1982.

Acornsite
http://www.argonet.co.uk/users/ajseeley/acornsite/index.htm

Get cracking

On 13 July 1998, RSA Laboratories offered a $10,000 cash prize to any individual or group who could crack a DES (Data Encryption Standard) encrypted phrase by finding the 56-bit code key in less than 10 days. A previous competition was won in 39 days using a huge network of thousands of computers but, within three days, The Electronic Frontier Foundation's specially built machine won the prize.

RSA Labs also have an ongoing decryption contest for a 64-bit RC5 key with $1000 prizes, and you can join in by downloading and running RISC OS client cracking software which runs on your computer in the background.

!RC5DES
http://www.distributed.net/clients.html

Contacting me

Keep sending me interesting URLs for the next yoUR List by e-mail to david@arcade.demon.co.uk, or mail #2 on Arcade BBS 0181 654 2212.



Information in your Pocket

Pocket Info, a new website from Psion, is described as a virtual reference desk containing vast amounts of useful information to download onto your Psion and Pocket Book.

The information is listed under six headings: Business, leisure, sport, travel, reference and sounds. Data can be downloaded in a number of different formats.

Some of the highlights on the site include results of major sporting events as they happen, for example, The 1998 World Cup and The Tour de France. Template files for common business reports as well as listings of the top 100 albums of all time can also be found on the site.

The site also has episode guides to some of TV's biggest programs including *Friends, Due South* and *Fawlty Towers*. Que?

The site contains over 200 data files, all available free of charge, so point your browser at http://www.pocketinfo.org/



The Pocket Info website

And for the converted...

Purple Software have announced the release of *ConvertPro* which is available, free of charge, only from the Purple Software's website and allows the user to convert a wealth of numerical information on their S5.

Conversion categories include Currency, VAT, Area, Speed, Temperature, Pressure and many more. The program also supports plug-ins to add more categories – finance and maths plug-ins are already available.

The program is a doddle to use, is free, comes highly recommended and will even tell you the number of minutes to the year 2000...

For more information or to download any of the packages take a trip to Purple Software's website at http://www.purplesoft.com/

Money (or lack of...)

Palmtop have just released the S5 version of the immensely popular *Money* package. The program, which in the S3 release is used by over 60,000 people, is designed to make it easier to manage your finances.

The program allows you to enter transactions on the spot, budget your expenses and will even predict your bank and credit card statements. *Money* keeps you fully informed of your current financial situation and will help forecast your future finances.

It is easy-to-use and, while not bewildering the user with complex accounting terms, can be used to manage the accounts of small businesses offering double-entry book keeping, VAT management and balance analysis.

It will also import your old Psion *Money* files and data can be imported and exported in many formats including the industry standard QIF format.

Look out for a full review of *Money* and other Psion finance-related packages in the December issue of *Acorn User*.

Palmtop
WWW: http://www.palmtop.nl

Fly high with Symbian

Psion's share price recently rose more dramatically than Richard Branson's escaped balloon. The reason for this is the launch of Symbian.

Symbian is the new name for Psion Software and is the result of an agreement between Psion, Nokia, Ericsson and Motorola.

The core focus of Symbian is to license EPOC for a variety of wireless information devices such as mobile phones and communicators. The company aims to drive the convergence of mobile computing and wireless technology, enabling Internet access, messaging and information access, all within a device that will fit into a shirt pocket.

The company intends to expand their EPOC licensing, support and development activities ensuring a clear distinction between the ownership of the company and their licensing activities. Symbian was greeted, as I have mentioned previously, with great enthusiasm by the City and hopefully will enable the EPOC32 operating system to see off the threat posed by Windows CE 2.0.

Symbian
WWW: http://www.symbian.com/

Try before you buy

Purple Software recently took the step of placing demonstration versions of all their S5 software onto their website to allow people to try before they buy.

The software available includes *Allegro, Navigator* and their range of S5 games and will work for 30 days or, in the case of the games, for 10-15 goes before timing out. The idea behind the new strategy is to allow users to check that the software comprises all the functionality the user requires before they purchase.

Purple Software
WWW: http://www.purplesoft.com

Get the message

Hopefully by the time you read this, version 1.5 of Psion's *Message Suite* will be available. The new version has been available to EPOC World members for some time now so should be on public release in the very near future.

The new version offers two major enhancements over the previous release; e-mail attachments and multiple remote mailboxes. The browser has also been tweaked and is slightly faster but still does not offer support for Frames.

Keep your eyes peeled on Psion's website at http://www.psion.com/ for the new version. A full review will follow in the next column.

Extras for your S5

Jason Kneen of *Backlite+* fame has recently released a beta version of his latest and long awaited new application for the S5 : *ExtraBars*.

Extrabars is a productivity tool that extends the capabilities of the Extras section of the S5. The full release will be available via the Palmscape scheme.

The main features of the program include; the ability to create multiple extra bar panels; define shortcuts to applications, documents, websites, folders and macros; assign hotkeys to panels for speedy access and switch between panels instantly as well as many other facilities. The program also features a number of wizards to take the user through the process of installation, creation and problem solving.

Extrabars integrates seamlessly with the S5 and existing applications that are already on the Extra's bar. The package allows the user to create custom panels for work, home, fun and so on or to organise the folders and files that are stored on your S5.

Contacting me

You can contact the Portables page by writing to me, Mark Taylor at *Acorn User*, Media House, Adlington Park, Macclesfield SK10 4NP, or by e-mail to auport@idg.co.uk

THE DATA STORE

15th Anniversary Year

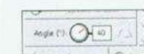


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See our double-page spread elsewhere in this issue for a list of some of the available titles

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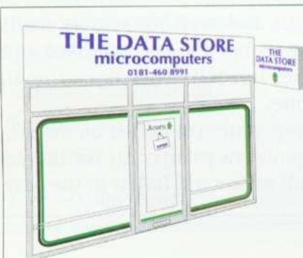
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The Data Store is one of only three dealers in the country which offer full, detailed demonstrations of Sibelius software. If you want to find out how the best just got better, ring us **NOW** for an appointment - you'll need at least an hour!



The Data Store is proud to have served the Acorn community for nearly 15 years, from the days of the BBC Micro and the Electron right up to the forthcoming 'Phoebe 2100'. If you're in the Bromley area, just 10 miles south-east of central London, why not visit our well-equipped showroom? If not, our mail and telephone order service is second to none. *If it's made **by** Acorn or **for** Acorn, we can supply it, and at competitive prices.* Come and join our ever-growing family of satisfied customers!

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The rise of e-mail

A number of recent correspondents to the Business Page have made pertinent comments which I wish to share with you all this month. The first point that they universally make is that they do not have access to e-mail or the Internet. There is nothing wrong with this as such – the Royal Mail is a perfectly good way to communicate even at the end of the 20th century. However, I would argue that it is not the best way to communicate particularly in a business context.



The rise of e-mail as the primary method of business communication has been the overwhelming and yet understated success story of the past 10 years. Forget the Internet for a moment – in the place I work the Internet, in the sense of Web pages, browsing, FTP and the rest, is hardly ever used, but e-mail is essential. It is not used to the exclusion of any other method of communication, although the internal and external memo – the bane of most offices – seem to be in terminal decline. The phones still ring, letters still arrive and the fax machine continues to make a mockery of the Paperless Office but I suspect none of that would be missed as much as e-mail.

E-mail has become not only essential but has transcended the medium as a method of communicating information. What makes an e-mail more than this is that an e-mail makes it official. Following a meeting or a telephone discussion will come an e-mail. It is rather like on the bridge of Royal Naval ship – the Captain will issue an order but it will not be acted upon until he says *Make it so*, e-mail is the business equivalent.

It has become a tool of management probably because of its ease of use, but perhaps the main reason is that it provides you with a trail of accountability. You have the evidence in front of you on your computer of who said what and when. No half-forgotten telephone conversation but clear irrefutable evidence.

For that reason e-mail can become a big stick and a good method of shifting responsibility if used incorrectly. But it is misused at your peril – most users are now wise to such abuse and the person who uses e-mail in that way is very likely to find themselves being increasingly ignored. Of course the best managers will still find time to discuss and talk to those around them but it is the e-mail which puts the official stamp on the outcome of the discussion.

In the Acorn world most businesses tend to be small to medium sized by any definition, but they need to be aware that external communication with any organisation where e-mail is part of the corporate culture should fit with that culture. The alternative is to appear to be like someone who handwrites a personal letter to a business – quaint but not to be taken too seriously.

I do not want to overstate the case for online communication. All methods have good and bad points but, whether we like it or not, electronic communication is as here to stay as the computer. A modem and an Internet account seem like a very small price to pay to have access to this indispensable medium. The high cost of even local telephone calls puts many off the use of e-mail but, used correctly, it should save you money as it is probably the most cost-effective method of business communication. If you don't believe it compare the cost of an e-mail with the cost of posting a letter.

Businesses that use Acorn computers that I have looked at in the past have tended to make little use of e-mail but I suspect even that is now changing, and in the coming months I intend to feature another series on Acorn-based businesses. For that reason a plea – if you run a business that make use of Acorn computers I would love to hear from you – by letter, e-mail or by carrier pigeon. You can contact me via the usual address at the bottom of the page, whatever the business and whatever use you make of your Acorn(s) and size does not matter.

Windows '98

By the time you read this some of the hype regarding the latest bloatware OS from Microsoft should have died down and Win'98 users will probably be installing their third set of fixes. Doubtless the original release will have a number of bugs or undocumented features as they are known. Rumours that it was rushed out in advance of the imminent RISC OS 4 should be as viciously squashed as any bugs.

Seriously though, the new release of the domestic version of the OS, (businesses use Windows NT), will bring PC users a step closer to the level of functionality which Acorn and RISC OS users have come to take for granted over the years.

Where's the software?

Alongside my plea for news of businesses using Acorns (see elsewhere this page) there seems to be a dearth of software being released specifically for business use at the moment. Of course it is more likely that what software is being released or has been around for a while is being used in a variety of innovative ways but I just do not know about them.

So over to you – if you use a piece of Acorn related software in your business, whatever that is let me know.

Who's calling?

Caller Display - the prog that shows you who's calling when the telephone rings - from Octopus Systems, has some new features in its second release. *Caller Display 2* comes with either a CID1 unit - which logs outgoing calls dialled from any telephone extension, or a Pace 56K voice/fax modem - which logs calls dialled via the modem. Both plug into the computer's serial port. Prices (including the software) are £99 for CID1 unit and £169 for the Pace 56K modem plus £5 P&P. This includes leads and VAT. More details are available on their website.

Octopus Systems
Tel: 01473-728943
WWW: http://www.octosys.co.uk/

Contacting me

You can contact me, Mike Tomkinson, by post at the usual *Acorn User* address or by dropping me an e-mail at: *aubizniz@idg.co.uk*

Acorn's Part Exchange scheme is back!

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cover disc





WimpBar 2

Apps | Open Dir | Misc — Technium220 — 12:42 15Mb

WimpBar 2 is a handy desktop utility which provides a toolbar at the top of the screen containing a number of user-defined buttons.

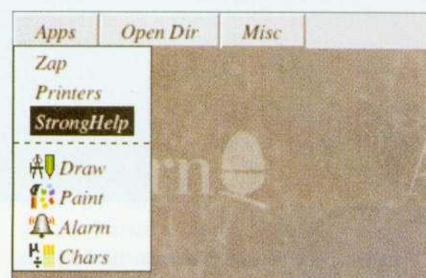
These buttons can be set up either to display a menu or perform a list of commands when clicked on. Each menu entry can be linked to an application or a *command. In addition to these, it also provides a number of other "really useful features".

It was designed to be as small as possible, so that it takes up the minimum of memory when running. Because of this, there is no sophisticated configuration system or anything, so it's all done through a rather dodgy script file.

Features

WimpBar 2 has a number of features you can configure, or ignore:

- You can have up to 64 buttons defined on the toolbar, each of which can be either a menu button or an action button.
- If you have too many buttons to fit on the bar, they will be squeezed in — so no need for multiple bars or scrolling. The buttons are variable width, according to the length of their title.



- Of course, this takes into account the current desktop font, and if the font is changed, the button widths will be automatically adjusted.
- A status icon, which displays the current time and free memory (either in kilobytes or megabytes, depending on how much there is free). This can be turned off if required, allowing the full width of the screen to be used for buttons.
- Clicking Select on the status icon displays the current date, and clicking Adjust on it will show the contents of **INet$Timer**, showing how long you've been connected to the Internet, if you are using Freenet.
- Clicking Adjust on the status icon can also be made to show the current time in a different time zone.
- Clicking Menu at the top of the screen brings the toolbar to the top of the window stack, in case it has become obscured. Clicking Menu a second time will send it to the back again. Also, the bar can be sent to the back when the pointer moves off it.



- A user-definable dragging system, allowing *commands to act on files dragged to the toolbar.
- Each command in a menu button, action button, as well as drag commands, can use macros.
- The background colour of the time/memory icon can change to let you know when there's a filer action window open.
- A read-only mode to prevent *WimpBar 2*'s settings from being altered.
- Totally user-configurable through a textual Choices file.

and all this in a typical wimpslot of 32K.

Drag commands

WimpBar 2 has the ability to execute a *command when a file is dragged to its toolbar depending on which keys are pressed and its filetype. Certain parameters are set up, so that the command can act upon the object dragged to the toolbar.

To set up a drag command, use a structure similar to this:

```
#DRAG_acS
```

followed by a list of allowable filetypes, then the *command, which can be a macro.

The letters ACS (Alt, Control, Shift) specify which keys have to be pressed for the command to take effect, so for example, a #DRAG_ACs command would only be executed when both Alt and Control were pressed at the same time as file is dragged.

When Alt+Control or Alt+Control+Shift, you can specify an extra key to be pressed, for example:

```
#DRAG_ACs X
```

would mean Alt+Control+X has to be pressed for the command to take effect.

As mentioned above, the *command can take parameters. So, for example, if you drag a file such as *ADFS::Technium.$.Fred* to *WimpBar 2*, the command line parameters will be set up as follows:

%0 Whole filename *ADFS::Technium.$.Fred*
%1 Just the leafname *Fred*
%2 The pathname *ADFS::Technium.$*

The filetype list is a comma separated list of hexadecimal filetypes with the following special cases:

1000 means a directory
2000 means an application
-1 means all files except directory or application

Putting it all together the following example means that when you Shift-drag a text file, an obey file or an application to the toolbar, its leafname is printed. Really useful, no?

```
#DRAG_acS
fff,feb,2000
Echo File: %1
```

Some slightly more useful examples are provided in the main documentation.

Shareware and Freeware

- *WimpBar 2* – a bar for your window
- *PinPatch* – JPEGs on your pinboard
- *PScan* – slow scan TV

Regular items

- Mike Cook's Infra-red transmitter
- Mac text to RISC OS text conversion
- All the *INFO programs

Disc information

The software on these discs has been compressed using *ArcFS 2* from VTi, and are opened by running a copy of *ArcFS* then double-clicking on the archive to open it. There is a copy of *ArcFS* on the disc.

Most software will run straight from the archive, but some programs may need to be copied out of the archive before being run, uncompressing them in the process. Any program that saves a file to disc, for instance, will be unable to do so into the archives on the disc.

Faulty disc?

If your disc is faulty, test whether it will verify by clicking with Menu on the floppy drive icon and choosing Verify.

If it fails to verify or is physically damaged you should return it to *TIB, TIB House, 11 Edward Street, Bradford, Yorkshire BD4 7BH.* If it verifies successfully return it to the *Acorn User* editorial office at the usual address.

The *Acorn User* cover disc has been checked for viruses using *Killer* version 3.001 from Pineapple Software

FEATURE

Blake's 7

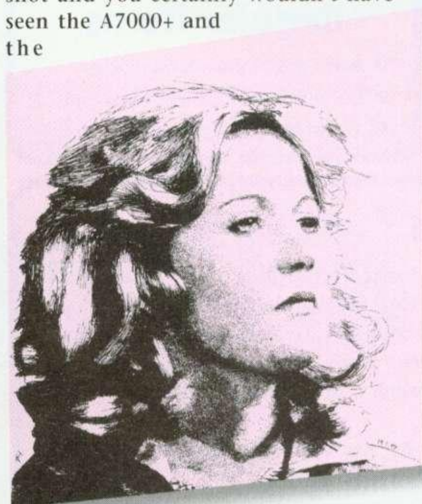
The Liberator

Judith Proctor tells how she uses RISC OS computers to prolong the life of another great British institution

Vila: ***I plan to live forever. Or die trying.***

Acorns on BBC TV are a rare sight. I recently appeared on *Lost in Space*, a programme interviewing fans of the classic science fiction series *Blake's 7*, and it actually started a minor debate on one of the Acorn newsgroups as to which member of the Acorn family I was using.

As it happens, it was a Risc PC. However, unless you were really eagle-eyed, you would have failed to identify the bit of the BBC Master that was in the corner of the shot and you certainly wouldn't have seen the A7000+ and the A4000 which were out of shot. That's not including another A3000 in a bedroom plus an older BBC Model B and another Master that have retired for good. Seven Acorns in fact. Seems appropriate.



The series

I became a fan of *Blake's 7* almost by accident. Back in 1993 I was lying around recovering from an appendix operation and a friend loaned me the entire series of *Blake's 7*. I abandoned my half-written *Star Trek* novel and never looked back. The premise for the series was straightforward enough: A group of interstellar rebels fighting the evil Federation. Nothing new – Robin Hood got there long ago.

The success of *Blake's 7* came from its characters and the relationships between them, and also from a willingness to look on the darker side of things. Blake's crew were escaped convicts and fighting for freedom for the masses didn't appeal greatly to all of them.

Vila: ***Where are all the good guys?***
Blake: ***You could be looking at them.***
Avon: ***What a depressing thought.***

Avon, a cynical computer genius – played with great conviction by Paul Darrow in spite of Paul's admission that he knows nothing at all about computers – became the greatest thorn in Blake's side, but at the same time a relationship of mutual respect and trust grew up between them. The continual arguments on the flight deck were a fascinating contrast to the smooth teamwork to be found on board the Starship Enterprise. The dialogue was fast and inventive and included many memorable lines.

Vila: ***I've got this shocking pain right behind the eyes.***
Avon: ***Have you considered amputation?***

Fanzines

I started writing my own fiction for the series, which was initially published by Horizon, the *Blake's 7* fan club. I then moved on to publishing it myself. There are no commercial publishers publishing *Blake's 7* fiction (unlike the vast quantities of *Star Trek* and *Dr Who* spin-offs) which goes part-way to explaining the enormous proliferation of fanzines – over 1,000 in the last 20 years. In the early days of the fandom, zines were produced with typewriter, stencils, mimeographs and so on.

Nowadays, we have desktop publishing, laser printers and affordable photocopying. It's a whole different ball game and allows for much higher production standards and better editing. Putting together a fanzine is

Vila: ***Avon's gadget works!***
Blake (seeing Avon's expression): ***What's wrong?***
Avon: ***For a major technological advancement, 'Avon's gadget works' falls somewhat short.***

very much a team effort. I may be the editor and publisher, but I only do part of the work.

The first stage with any zine is collecting material. Nearly all my zines are for fiction, so my first task is finding writers. I start out by requesting material both on the Web and on the *Blake's 7* mailing lists. However, experience shows that waiting for people to come along is a slow process – though I have had some excellent submissions out of the blue.

Now I ask people directly. I've gone to a fair bit of effort to trace fan writers whose work I admire and I also look out for new writers. Fans often post snippets of stories on Internet mailing lists. If I see one that looks promising, I ask the writer if she'd like to write something for my next fanzine. We swap story ideas back and forth by e-mail and, when the story is complete, I'll send feedback and editing comments.

When I've got a completed story, I e-mail the text to a fan artist. I often work with overseas artists, and this is getting easier and easier over time as they acquire scanners. We don't have to mail originals any more. Kathryn can scan her picture in Australia, e-mail it to me and I can print it out with my laser printer or keep it as a file within the text, depending on how I want to lay it out.

I use *Publisher* for my layout work and apart from things designed to be useful to the reader, such as using story titles as page headers, I tend to keep things simple.

Although I have the scope to do a lot of clever layout and play with fancy fonts, my own preference is for a clean, easy-to-read style with minimum distraction from the actual stories. The only area where I do a lot of text manipulation is in ensuring that pictures fall opposite the relevant piece of text. Badly positioned pictures are a particular bugaboo of mine. *Publisher* allows for small changes in font size and I find that altering a large block of text will usually shrink or expand it by enough to get the relevant text with the correct picture.

Avon: ***What's the matter, Blake? Don't you trust your friends?***
Blake: ***Of course. I trust them the same way I trust you.***

Once a zine is complete, I rope in yet more friends as proof-readers. Here, I nearly always resort to paper printout. Punctuation details such as left and right quote marks show up much more clearly on paper than on screen and in any case it is easier for them to mark up the paper copy. Once all the proof corrections are in, I print out the master at 600 dpi and head down the copy shop.

Copy shops vary a lot, both in price and quality, and shopping around is essential. A peculiar quirk in British VAT regulations makes binding zines at home uneconomic even if you own a binder. Books are zero-rated for VAT. Photocopying is not. If the shop doesn't bind it, it isn't a book. When you compare 17.5% VAT on the copying against £1 for a glue fastback binding, the saving just isn't worth the hassle of doing it yourself.

Overseas fans

As time went by and the number of zines I had in print increased, I became more aware of the difficulties that overseas fans had in handling the problems of currency conversion. Some paid out for International Money Orders, some risked sending pounds and dollars through the post and many didn't bother buying zines at all.





My turnover was far too small to interest credit card companies, so I looked for othersolutions. Fandom is very international in nature.

Blake (to Avon): ***Having defined the problem, the first step towards a solution is the acquisition of data. You should know that.***

Through the medium of the Internet I'm in daily contact with *Blake's 7* fans in Australia, America, Canada, Belgium, Sweden and the Netherlands. I now work closely with a couple of fan publishers in America and Australia and we take payments for each another in the local currency.



To keep things in perspective, I should mention that fanzines are not big business. I count a fanzine a success if I have to print over a hundred copies. It can take a long time to break even on a zine, particularly if it has a large number of contributors.

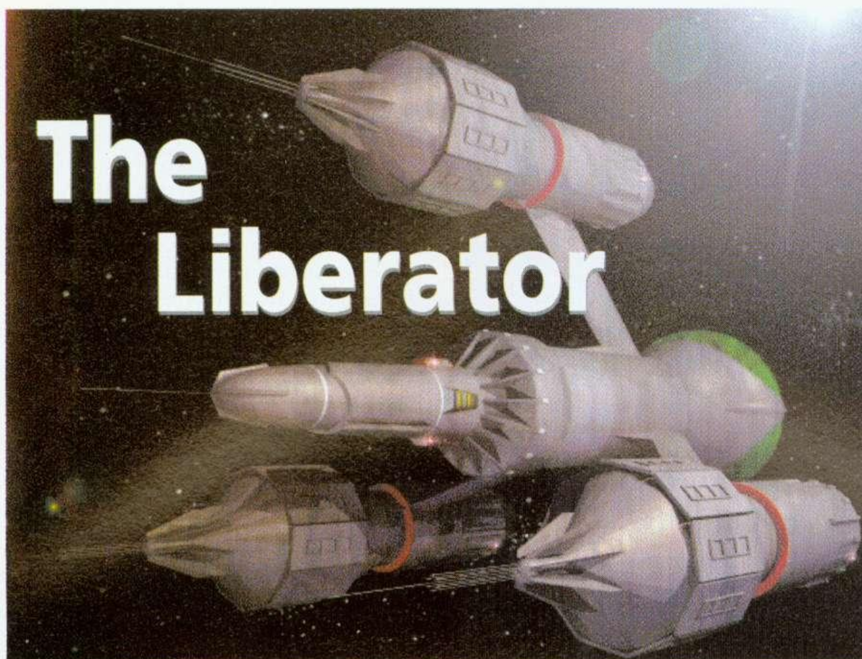
Traditionally, everyone contributing more than a couple of pages to a zine gets a free copy. For a large anthology, that can work out at around 20 contributors when artists and proof-readers are taken into account. It's a hobby, not a way of making money. You have to be slightly nuts to want to publish a zine.

Vila: ***Avon, this is stupid.***
Avon: ***When did that ever stop us?***

The Web

My husband and I (where have I heard that phrase before...) set up a website to help publicise the fanzines but, like Topsy, it just growed. Now it contains a database of all the *Blake's 7* fanzines we know of, both mine and those printed by everyone else; a section with news on the *Blake's 7* cast; an encyclopaedic database covering all planets, aliens and characters in the series; information on fan clubs; a massive section on Gareth Thomas (Blake); quizzes; essays and far more besides.

Our approach to Web page design is rather like my philosophy on zine layout. ➤



'Keep it simple; make it work.' HTML is interpreted by all machines in different ways. It's impossible to predict completely what anyone else will see on their machine and it's important to bear this in mind.

We stick rigidly to HTML 3.2 to ensure that the vast majority of readers can view everything on the site without problems – only those who cannot use tables will hit occasional problems. We use lots of small pages to ensure fast access and ruthlessly compress images for thumbnails. Images on many Web pages we visit are stored at a resolution higher than the screen is capable of displaying and that simply adds to download time while giving no improvement in the quality of the image.

Blake: ***You have to be careful of the planet life around here. Some of it's carnivorous... Some species even have an intelligence rating.***
Vila: ***That's a comfort. I should hate to be eaten by something stupid.***

We compose HTML pages using *!Zap*, building up a complete site image on the hard disc. A set of home-produced tools are used to completely check internal links, verify the syntax (weblint), maintain date and version fields and produce complete site deltas for upload. These tools may be downloaded from http://www.waveney.demon.co.uk/Acorn/

The site currently consists of about 900 pages, over 600 images (many captured from the TV with a frame grabber), 20 Perl scripts and 17 other files including such things as multiple choice quizzes. Perl scripts are very useful as they are machine independent and can be developed at home on RISC OS and run on the server under Unix.

The Perl scripts range from simple banners, through a guest book, quizzes, a search engine, a price converter for my zines, to selected subsets of Gareth Thomas's career and one script that displays the pages of my American partner through ours.

Jenna: ***Don't blame me if it's self-destruct.***
Blake: ***I doubt if I'll ever speak to you again.***

This last one is a very sophisticated script that allows English readers using my page to access a normal-looking link to Linda Knight's page, but causes Linda's page to be displayed in a style akin to our own pages and with all the dollar prices converted into pounds. All the links from her page are converted into further calls to this script, so that lower pages also show the price in pounds. All special offers and postage discounts are also automatically converted into pounds.



Blake: ***I'm not sure I entirely trust a computer with a mind of its own.***

Some of these scripts are modified from other sources and some are completely original. Those interested may find a library of some of the scripts at http://www.hermit.org/Blakes7/Admin/Admin.html

Gareth Thomas

There's little physical resemblance now between Gareth Thomas and the man who played Blake 20 years ago, but if you meet him in the flesh you'll instantly understand where Blake's charisma came from. Gareth Thomas is a delightful, intelligent man and a very talented actor who ranges from major Shakespearian roles such as *King Lear* to a comedy turn as a farmer with a ghost in his barn on *Heartbeat*.

Avon (about Blake): ***He is strongly identified with rebels, you see, and very popular with rabbles. They will follow him, and he will fight to the last drop of their blood.***

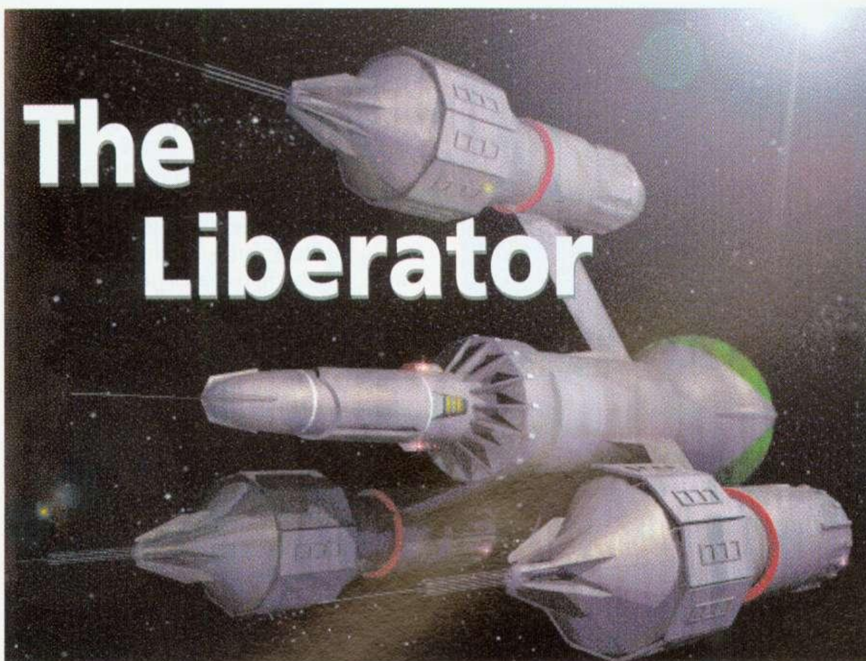
I once saw him do an absolutely stunning performance at a convention of a piece that he had written himself about a Welsh miner trapped underground. I've never seen an audience so caught up in something. Anyone opening the door from outside got fried by a roomful of glaring eyeballs.

I run an unofficial Gareth Thomas fan club which can be found on my website. I post anecdotes and pictures for roles that he's done in the past and publicise anything that he's currently appearing in. The sheer volume of work that he's done means that this is the one page with really excessive download time, so there's a script which allows people to select their own subsets based on date, media or alphabetical order. Once again, all implemented by RISC OS.



The Net

Fandom is about friends. *Blake's 7* might be a great series, but if I didn't have friends who shared that interest I would have abandoned it long ago. As it is, there is a thriving *Blake's 7* community on the Internet and I've got to know many wonderful people there. When we get to meet up in the flesh at conventions or for other reasons it's an added bonus.



The Liberator

Avon: ***Doesn't it make you feel good to be wanted?***
Vila: ***I've been a wanted man all my life. What I need now is to be unwanted.***

I've had the pleasure of having fan friends from several countries to stay here and the result is always the same. We have a ball. It takes about 10 seconds to get used to someone not looking a bit like you imagine, and then you get on like a house on fire.

There isn't a newsgroup for *Blake's 7*. Most of us hang out on two mailing lists. Lysator is an open list for anything and anyone – though adult topics are generally avoided. Space City is a moderated list for adults only. I belong to both. You'd think that after 20 years, everything that could be said about *Blake's 7* would have already been said, but this isn't the case. There are many original and entertaining ideas brought up and there are also many new fans who have come to the series in the last few years from either the screenings on UK Gold or the video tapes.

Perhaps I value the mailing lists even more than other people do. Several times in the last few years I've had severe problems with my voice. When you have difficulty talking to people, a group of argumentative, imaginative, creative and supportive fans on e-mail can be an absolute life-saver.

Conventions

Conventions are part of the life-blood of fandom. You can manage without them, but it's far more fun with them. Where else can I turn to someone at random, ask what he or she thinks of Servalan's style of leadership and get an instant intelligent answer? Where else will I still be talking to friends after the bar has shut, singing songs about spaceships and suddenly realise that I've been enjoying myself so much that I forgot to get anything to eat for tea?

Servalan: ***It does seem an excellent plan. It should have every chance of success.***
Travis: ***I'm glad you approve.***
Servalan: ***Oh, Travis, you know better than that. In my position one never approves anything until it is an undisputed success.***

Almost inevitably, I ended up running a convention myself. I'm chair of the committee for Redemption '99, a *Blake's 7/Babylon 5* convention to be held in the Ashford International Hotel 26-28 February 1999. The committee are all on e-mail, so we maintain a small internal mailing list and use it to deal with our day-to-day business.

Requests for information or offers of help are forwarded electronically to the correct person. Transferring documents and spreadsheets has been somewhat of a problem as we have difficulty finding formats that we can all read, but we usually manage to find a lowest common denominator.

Art is much easier. Formats seem to be more universal there. The art for the convention T-shirt – a rather striking design of Liberator fighting a *Babylon 5* Shadow ship – was drawn by a fan in Australia and sent to me by e-mail. We used *!Draw* to produce the convention name and date, before printing everything out on my laser printer and taking it down to the print shop.

The Redemption Web page is http://www.smof.com/redemption/

Useful information

The *Blake's 7* video tapes are currently being re-released. If you can't see them in your local video shop, ask. They are produced by Fabulous Films and only seem to be easy to find in really large stores or specialist SF shops. They are also available through the fan club.

Vila (with irony): ***Good. Terrific. I'm really looking forward to this. Danger, excitement, sudden death. I can't wait.***

For details on *Blake's 7* fanzines, Redemption '99 and Horizon: The *Blake's 7* Appreciation Society, send an SAE to Judith Proctor, 28 Diprose Rd, Corfe Mullen, Wimborne, Dorset, BH21 3QY. Full details are also available on http://www.hermit.org/Blakes7 AU



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Which two main characters had the following exchange?

A: My people have a saying – He who trusts can never be betrayed, only mistaken.

B: Life expectancy must be fairly short among your people.

A:..............................

B:..............................

Name..............................

Address..............................

....

....

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Relatively sp

John Pettigrew begins a short series on creating and using relational databases

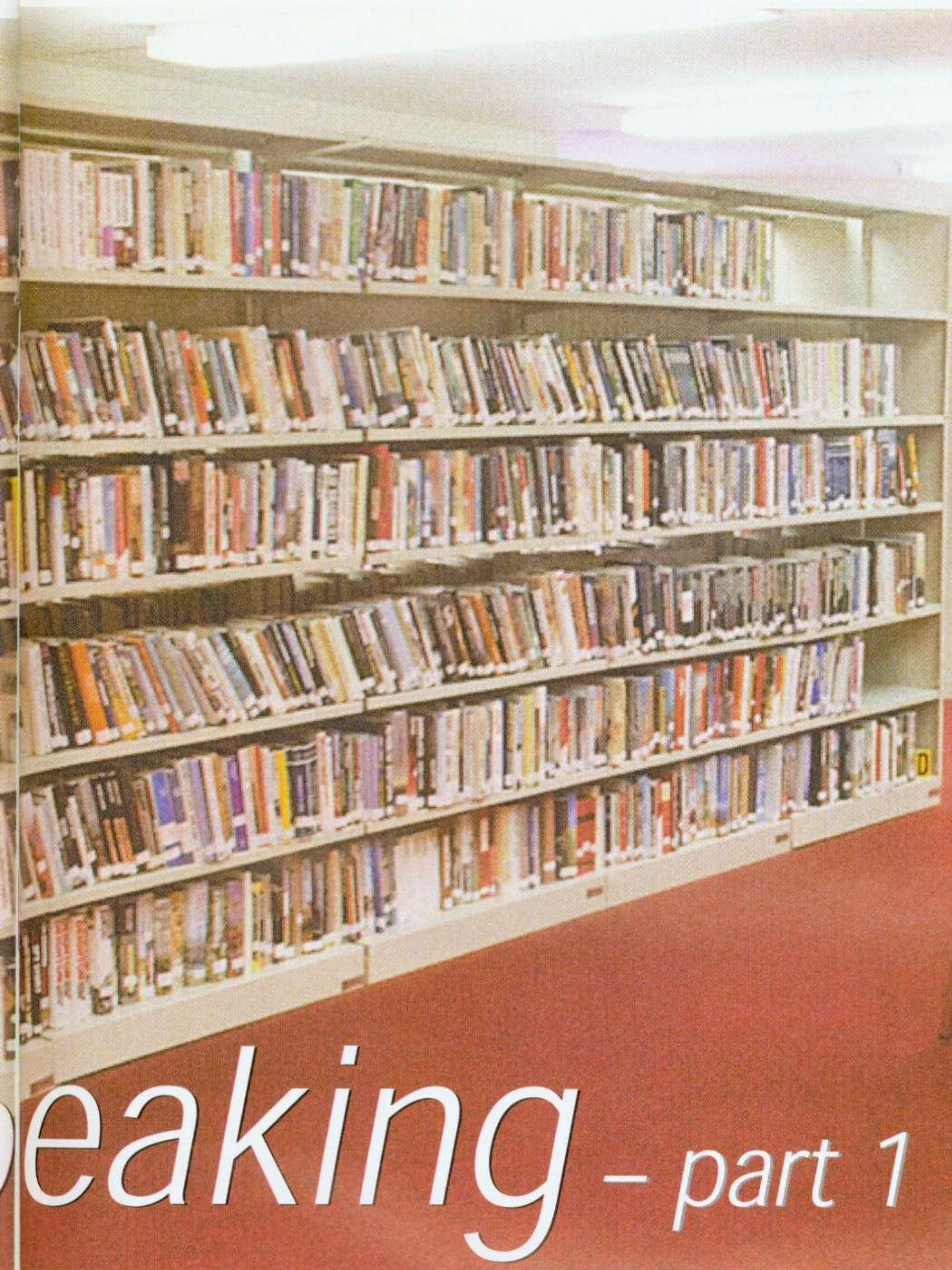
Are relational databases as forbidding as they at first seem? That is the question I'm going to be addressing over the next three months, and attempting to show that, with a little thought and planning, quite complex tasks can be performed reasonably easily using the database software available for Acorn machines.

What is a database?

A database is simply a collection of information (data), but the word is almost always used in connection with data on computers. Confusingly, 'database' also commonly refers to the software used to access the data (which is more properly known as a database management system or DBMS). In these articles, to avoid confusion, I will use *database* to refer to the information and *DBMS* to refer to the software.

A database can be thought of as being like a drawer in a filing cabinet: there are several hanging files, each labelled with a person's name or some such identifier; each file contains several pieces of information about that person (their name, address, telephone number and so on). A simple flat database is just like this – the DBMS allows you to flick through the hanging files, showing you what information each contains.

A relational database is more powerful than this. In essence, it allows each file to contain pointers to other files in other drawers in the filing cabinet. For example, libraries must store the details of every book, of every member and of all the books that each member has borrowed. This could be done by simply copying the data from the book's file into the borrower's file, but this would involve a lot of duplication. It is much



simpler to store only enough data to identify which book has been borrowed by which borrower; if other information is needed (such as the borrower's address or the book's publisher) it can be looked up in the relevant file – and this is usually managed automatically by the DBMS.

In order to do this, each file must contain something that uniquely identifies it. The book title or the borrower's surname alone will not do, because there may be many copies of each book in the library and many members with the same surname ('Smith', for example), and so the database must assign unique codes to the files. These are known as *primary keys* in relational databases, because each references or 'unlocks' a unique file. The borrower's file might then contain a copy of the primary key for each book she has taken out, and this is known as a *foreign key*, because it unlocks a foreign file.

All this might make relational databases sound very complicated. However, as with many computer-related things, the jargon makes things sound difficult but, once you have got your head around the ideas involved, it is really not that bad.

In this first article, I will show you how to use a relational DBMS to build a database that allows you to keep track of your personal finances. Articles in the next two issues of *Acorn User* will build on this to illustrate the power of relational databases. For these articles, I will be using *DataPower 2* from Iota Software, and so the instructions and screenshots will be specific to this. However, the concepts involved should allow you to do something very similar using any DBMS.

Planning your database

The first step in creating any database is to decide what information you want to store in it and what results you want it to produce (that is, how you want to access the data).

Then you can decide on the structure of the database and how it all fits together. Once these decisions have been made, transferring this to the computer is much less of a problem. A badly planned database is usually worse than no database at all.

So, if I want to build a database to keep track of my finances, what information do I need? First, I need to record my account details (the account number, its balance and what bank it is with); second, this implies that I need to record the details of my bank (name, address and telephone number); third, in order to be any use, I must be able to record my transactions (the amount, which account, what it was for).

Having decided on the information I need to keep, how do I want to access it? That is, what reports should the database be able to produce? I decided that I should be able to enter and check my transactions, and to check on the balance in each of my accounts. Thus, the DBMS should have a layout that allows easy entry of the transaction information and should produce an account statement, preferably with a record of the transactions, so that I can check them.

How does all this information fit together? We know that I want essentially three sets of information: the details of each account, each bank and each transaction. These three sets of information are linked but, as in the library example above, splitting them up saves space and effort.

However, although it may be obvious to a human being how the sets of information are related, we must still tell the DBMS. In database language, we must define the relationships between the sets of files – which sets of information are linked. Thus, here, for example, the banks and accounts are linked (the information in the two sets of files will refer to each other).

In addition to telling the DBMS that the banks are related to the accounts, it is also possible to tell it that there may be many accounts in any one bank. This is known as a one-to-many constraint, because it means that the DBMS will now allow the bank to refer to many accounts but will only allow accounts to refer to one bank. It is also possible to create one-to-one and many-to-many links. The process of deciding how to break your data ➤

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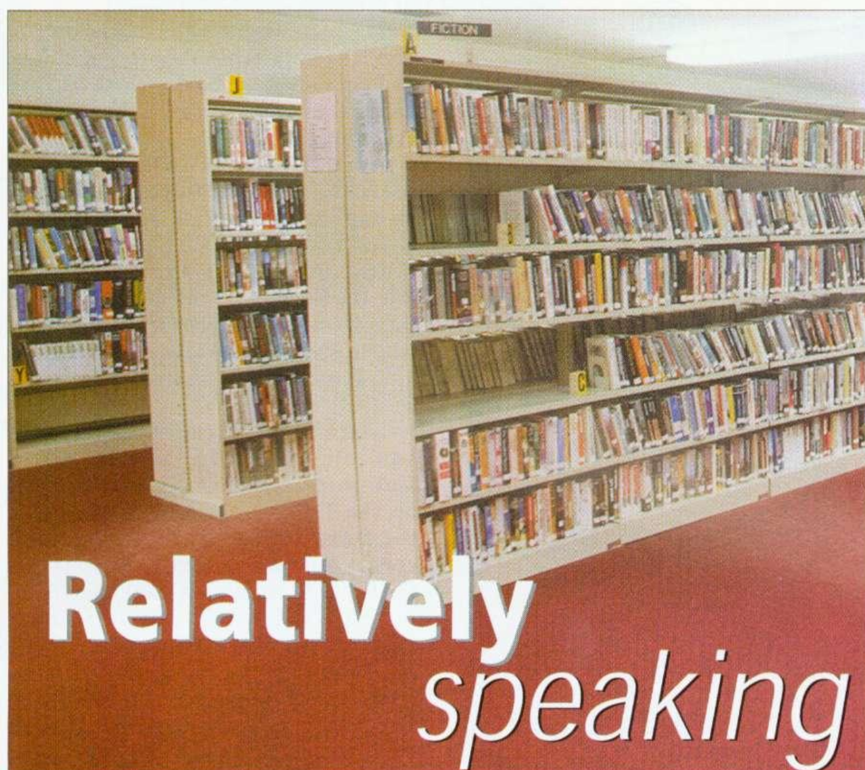
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➤ down into these related groups is called 'data normalisation' but, as you have seen, isn't as hard as that makes it sound.

Creating your database

We have now decided what we want the database to store and what we want it to produce. The next step is to create the database. In database terminology, each of the sets of information (bank details, account details and transactions) is known as a 'table'; 'records' are the specific information for each member of the table; 'fields' are the individual pieces of information. Thus, the bank name, its telephone number and its address are the three fields making up a record within the **Bank details** table. The different tables of information within the database are related to one another via primary and foreign keys.

First, we need to create the tables to hold the data. *DataPower 2* automatically creates a unique field for each record in a table, with the name **ID**, so we need not worry about this – although, if you are using a different DBMS, you may need to create these yourself.

The **Bank details** table needs three text fields to hold the bank's name, address and telephone number. The telephone number should be text and not a number field, because the phone number may include non-numerical characters, such as brackets, spaces or hyphens.

The **Account details** table needs to hold the account number (integer) and a foreign key to the **Bank details** table (integer). It could also hold other information, such as the account type (current, cheque, deposit and so on), the date it was opened and the interest rate. Surprisingly, this table does not hold the balance of the account because this will be a calculation based on the transactions that have occurred – we will come back to this later.

The **Transactions** table needs to hold foreign keys (integers) to the **Account details** for each transaction, and also the amount of the credit or debit (both real numbers), the date of the transaction (date type), a comment (text – to record exactly what you bought, for example) and the type of the transaction (text, for example, cash, cheque, credit card – this can usefully be made into a pop-up list to ease data entry).

Figure I shows the tables involved in this database and the relationships between them. The lines between the tables show the relationships – the fields at the ends of the lines are the primary and foreign keys for the relationship, and the 1 and infinity indicate the one-to-many status of the relationship.

You might like to try entering your account details and some transactions into the database at this stage, but you will see several problems: the layouts require you to enter the account number by hand (for the transactions), and also to know which ID number relates to which bank (for the account details). This can be overcome by using the power of a relational DBMS so that you don't have to remember all these numbers. ➤

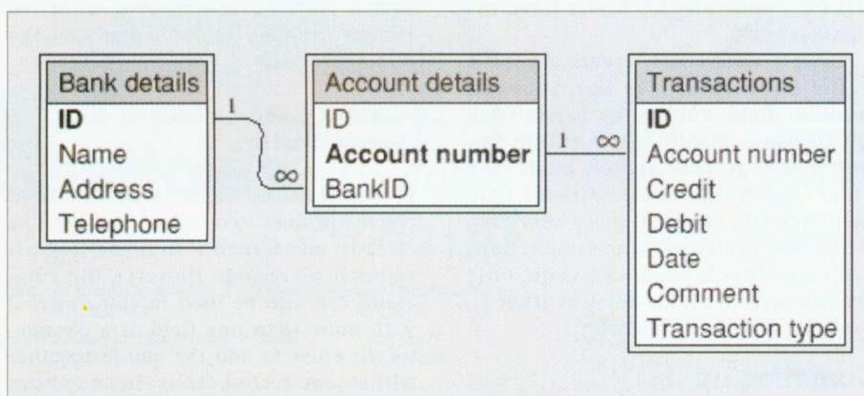


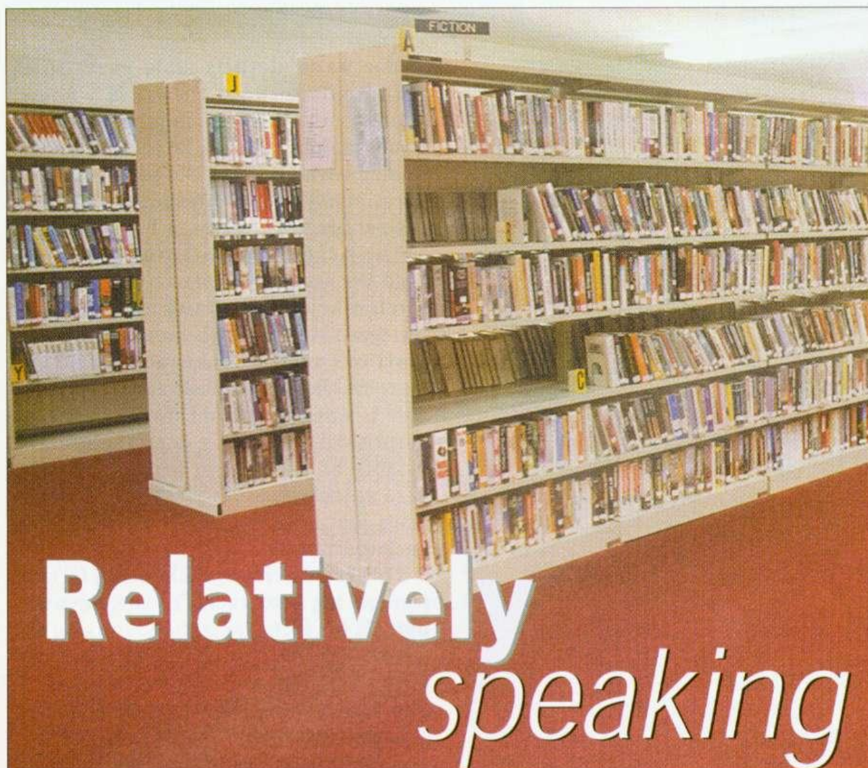
Figure I: The relationships between the various tables in the Finance database are shown here diagrammatically, with the 'one-to-many' status of each indicated

Credit

Date 18th Jul 1998
Account number 12345678
Credit £13.00
Comment Sold some books
Type Cash

Barclays Bank
Bene't Street
Cambridge

Figure II: The layout I have designed for entering credits into the 'Transactions' table. Note the pop-up menus for the account number and the transaction type



Relatively *speaking*

Return to layout mode, delete the **BankID** field from the **Account details** layout (but not from the table) and add the **Bank details** table to the join for this layout. Adding the bank name, address and telephone number to the account details layout thus allows us to see information that is meaningful to a human being, instead of the DBMS.

Making the Bank name a pop-up menu based on the values in the database makes it even easier to select a record from the **Bank details** table. The address will be filled in automatically by the DBMS, which also takes care of entering the correct foreign key value into the **BankID** field of the **Account details** table; the user need not worry about this at all, as it is hidden from them by the DBMS.

Next, create a new layout based on the **Transactions** table, calling it **Credits**, and delete the **Debit** and **Type** fields. Add all the tables into the join for this layout and add the **Bank name** field (so you can check you have the right account).

To ease data entry, create a pop-up value list attached to the **Account number** field, containing values from the database. Finally, while still in layout mode, go into search mode and enter 'Not Null' into the **Credit** field and click OK. This will make sure that, when you are examining transactions later on, this layout will show only records with a credit amount (that is, omitting records with a debit).

Summing up

On returning to browse mode, you will have a layout like that in Figure II. This should make it easy to enter transactions as you are automatically given the choice of which account to use, so you don't have to remember the numbers, and are shown the bank's name and the balance, so that you can make sure that everything is OK.

Repeat this process for the **Debit** field (deleting **Credit** from the layout instead) and you should now be able to enter transactions to your heart's delight. However, we still need to calculate the balance of the account. To do this, we need to construct a summary, which will add together all the credits and subtract all the debits for each account.

Return to the **Account details** table and create a new layout called **Statement**. Now create a subview based on the **Transactions** table and place the **Date**, **Type** (from **Transaction types**), **Comment**, **Credit** and **Debit** fields inside it; put the bank details on the main layout. Now we are ready to calculate the balance for the account. Drag the **Credit** field out of the subview onto the main part of the layout. This will create a new summary field containing the formula:

```
Sum('Credit') For 'Account details'
```

This formula will summarise the values in **Credit**, adding them together, which isn't quite what we want, so rename the field **Balance** and alter the formula to read:

```
Sum(Sum('Credit',-'Debit')) For
'Account details'
```

What does this mean? Well, the 'Sum' command does two tasks. The first I've already mentioned – summarising all values in all records. However, this command can also be used in *DataPower 2* with more than one field as a parameter, in order to add the values together within one record. Thus, in the above formula, the second Sum is adding the value in **Credit** to minus the value in **Debit** (that is, subtracting **Debit** from **Credit**) for each record. Once this has been done, the outer Sum totals this over all the records. Figure III shows how this statement should appear.

Account statement

Account number 12345678
Name Barclays Bank
Address Bene't Street
Cambridge
Telephone 01223-123 4567
Balance £467.66

Date	*Type*	*Comment*	*Credit*	*Debit*
18th Jul 1998	Cash	Sold some books	£13.00	
18th Jul 1998	Direct trans	Pay	£492.62	
18th Jul 1998	Debit card	Bought CDs		£31.98
18th Jul 1998	Cheque	Bought two books from Heff		£5.98

Figure III: The account statement generated by this database, with the calculated balance shown

Where do we go from here?

Next month, I will be working through the design of a more complicated database on the same principle as this. This will be a transaction system for a local exchange trading scheme, and involves many members trading with each other, and must produce much more data. However, the principles are essentially the same as those used in this relatively simple database.



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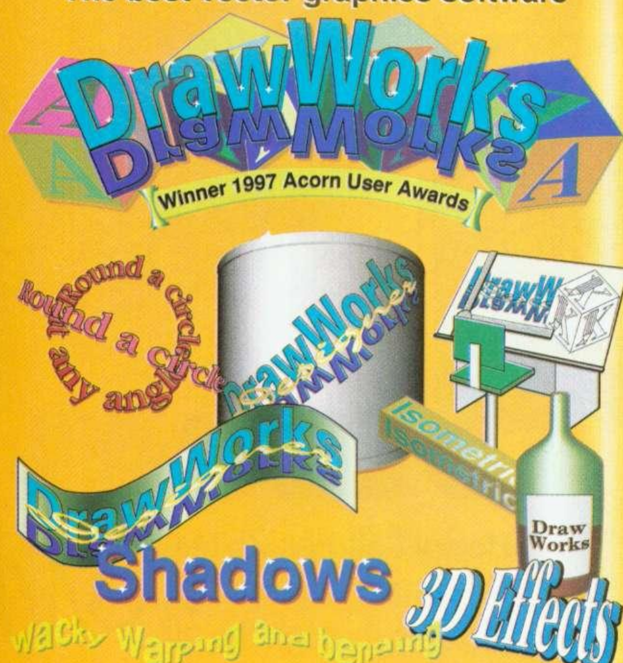
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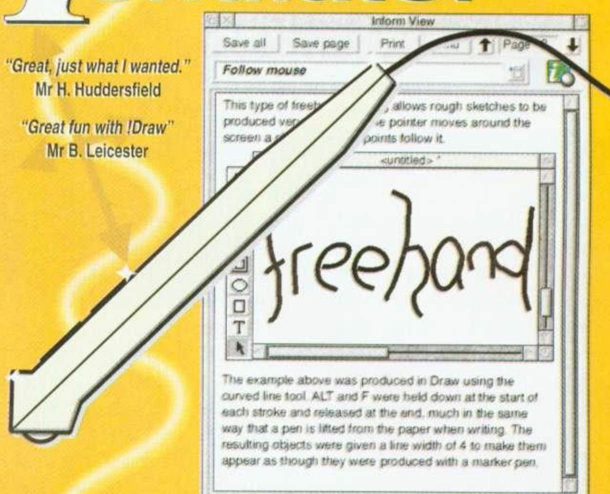
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Steam r... wi...

Henry Falkner, ZL1AAN,
explains how he sends pictures through the air

A radio gives you sound and TV gives you sound plus moving pictures. To make pictures move they have to be transmitted very fast which uses up a lot of space in the radio wave spectrum. Two TV broadcasts side by side would use up the whole radio FM band and it would take five AM bands to transmit a single TV channel.

Radio amateurs and public services use short wave radio for long distance communication without satellites, and here things are tighter still. You can forget about movies, but you can send and receive single colour pictures at about two minutes for each.

Up to 1986 the gear needed to do this was highly specialised, complex and expensive, but now you just need a general purpose computer, a program and an interface. Until a year ago the programs were available mainly for PCs, but then radio amateur Paul Turner (G4IJE) came to the rescue and wrote *PScan* for the Risc PC.

The interface needed for this will be no trouble for Mike Cook fans. For reception you don't need the transmit- and the push-to-talk components, the necessary Hamcomm interface diagram is included with *PScan*.

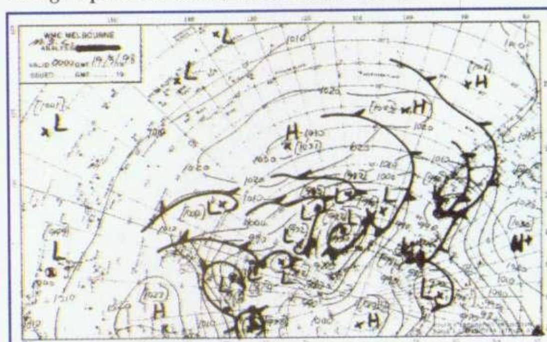
I built mine on a piece of veroboard, inside a plastic box. I added a 10K preset and a 10K fixed resistor ahead of the Hamcomm circuit. This reduces noise on the op-amp input and therefore helps with weak signals. The receive circuit looks to me like an analogue to digital converter and the transmit circuit is really a low pass filter. I added a 56K fixed resistor between filter components and preset to stop the transceiver microphone circuit from overloading.

You also need a short wave radio that receives Single Side Band. There are a number of Sangean and Sony models that do the job. I use the Sony ICF-SW55, which is bigger than a paperback and the Sony ICF-SW100, which is Walkman-size. The tape-out socket works best with the Hamcomm interface. The antenna is an outside wire.

Computers generate radio noise but the Risc PC generates noise that is often below that of the background noise on short wave and this has to be a major consideration when using a computer with any radio communications. For some years I have been able to use a Risc PC with omnidirectional antennas for satellite BBSs because of its low noise output.

Having dealt with the hardware, let me introduce Paul Turner's SSTV program which you can get from his website – URL given at the end.

The program installs on the iconbar and clicking on its icon gives you an opening screen. The program is not multitasking and choosing options and directories does not adhere to Wimp conventions either, but they do what they say. Pressing H for help brings up the manual, which serves as an introduction to Slow Scan Television as well.



There is a button bar at the bottom of the screen. Starting with the first eight buttons from the left, these store up to eight images in memory, which can be saved later.

The next, yellow, button brings up a menu for the mode of receiving and transmitting. *Martin 1* is the default mode and is the name of the bloke who originated it. *Scottie 1* is an earlier SSTV mode doing the same job. It is regularly used down here in Australasia. In addition there are quite a few other modes available. Some take just a minute to receive and will only work with stations close by and with no fading. Others, for example *SC2 180*, take up to three minutes but are less susceptible to interference. So far, *PScan* has provided for any mode I have heard. The yellow button menu also selects fax modes. I have only received Weather Fax in black and white up to now.







SONY SW55 - not edited

There follows a grey button labelled *VIS* by default. In Slow Scan modes it is expected to auto-detect the mode in use. On the 20m amateur radio band, auto-detect works for me on the portable receivers under good conditions. On my new transceiver, it works nearly every time. When a fax mode is in use, the labelling changes to *PHASE*.

It will start reception when a long mark and short space is heard. This is followed by the fax image itself. Unlike with SSTV however, fax reception must be terminated by holding down Select on the mouse. Otherwise, the image rolls off the screen before reception is terminated. Here in Auckland, NZ I can receive weather charts from Melbourne,

radio
th pictures

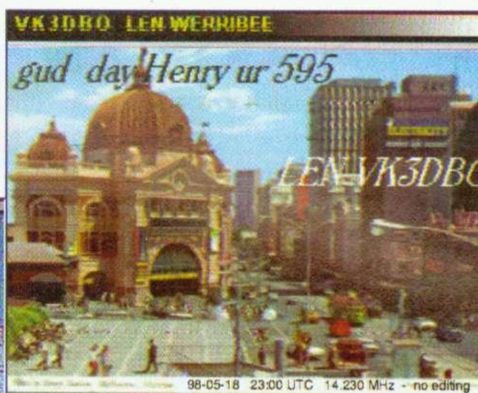
Australia with monotonous regularity. During a demonstration at the Western Suburbs radio club, those present found it difficult to believe I was receiving live, with a portable transistor radio, on their untuned wire antenna.

The *Receive* button starts reception on a valid SSTV signal, not on plain noise, providing the audio level from the radio matches a range that the interface, as mentioned above, can handle. The program supposedly works only with a tuning accuracy of +/- 50Hz, but I find it latches within a range of +/- 200Hz. When reception has started, you sometimes find that the three colours – yellow, pink and blue-green – have not superimposed precisely. Using Adjust on the Receive button will then register the colours when the radio tuning is within +/- 100Hz.

The *Transmit* button starts transmitting the currently displayed image, whether that has just been received or selected from a directory. Progress is indicated by a horizontal black line wandering down the screen. In the process of re-writing this article, I have obtained a new transceiver, a Kenwood TS-570S. It has a data in/out socket at the back, which provides the same audio level as do my portable receivers. Two days ago my first contact with VK2JY, near Sidney, was successful. This morning I spent two hours exchanging virtually noise-free images with Len (VK3DBO) near Melbourne.

There are five icon buttons with picture creation and processing options. The most useful – *Repair QRM* – is found from the Tools button. It replaces the line selected, using a cross hair, with the line below. Noise shows up as lines of dots in the three primary colours and strong speech shows up as white lines. Many slow-scan modes employ a resolution of 320 x 256 pixels. *PScan* represents them as 640 x 512 pixels and this makes editing out lines, representing interference or noise, quite easy.





The third to last button on the bar allows insertion of text with effects, which take a bit of getting used to, and the manual has been updated in response to the problems I experienced. I had some contact with VK3DBO and managed to use both the Quicktext and the normal text options, without long and frustrating pauses causing irritation at the other end. The second to last button brings up a page of thumbnail sketches, but only in the registered version of the program. I use it for bragging to visitors.

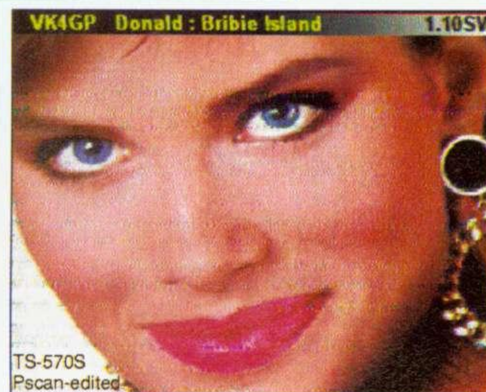
The last *Filer Cabinet* button opens the current directory. The directory opened first can be preset using *Choices* from the iconbar icon menu. Alternatively it can be chosen by clicking on directories displayed. There is also an Up and a Root button. If the icon clicked is an image rather than a directory, that image will be loaded and scaled into the currently selected *PScan* memory from which it can be transmitted.

So how does *PScan* feel in use? Such causes for complaint as I had have been eliminated. Reception of images was successful from day one, when I received pictures from Spain.

Transmitting now on my new transceiver is even more satisfying. I have had no complaints about picture quality; *PScan* seems to be up there with the best. Since SSTV is well supported on PC clones, what incentive is there to use an Acorn instead?

The StrongARMed Risc PC, even when equipped with a 586 card, is not a blatant jamming transmitter. Some noise in the reception still allows recognisable images. Slight remaining monitor scan noise can be reduced even further by adding ferrite beads on the serial port connection, which the interface uses to talk to the computer. Listening to conversations, it appears that *PScan* leads to considerably less frustration than using about half of the PC programs currently available. My first transmission efforts were successful, in part, because I could load images for transmission without lockups.

I now have a collection of images from Germany, Hungary, Russia, Mongolia, Australia and Japan, received on or near 14.230MHz on the 20 metre amateur radio band. My first day transmitting pictures yielded a return image from VK2JY in Australia and a fair report from UA0SJ, a Russian station.



PScan is a program that has been sadly lacking from the Acorn scene. It costs just £15 to register but it's worth it. The unregistered version is fully functional for receive and transmit, which may act as a deterrent to registration. Registration lets you create thumbnails from saved images and enables you to obtain upgrades from Paul's website. The upgrades contain easier image and text editing.

AU

Product details

Product:	PScan
Author:	Paul Turner
Call sign:	G4IJE
E-mail:	Paulg4ije@aol.com
WWW:	http://members.aol.com/pscansstv/
Packet radio:	G4IJE @ GB7DAA.#33.GBR.EU

News from the exhibitors!

Acorn WORLD

London Arena, Docklands
16 - 18 October, 1998



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Here are just a few of the new and exciting products that you will be able to see at the premier Acorn event of the year!

Aleph One are pleased to announce the arrival of *!PCPro 3*, which will provide higher performance and easier use of PC cards on Acorn Risc PCs.

!PCPro 3 has many new features which include a completely new Installer, a revised user interface, the ability to change screen size and resolution without resetting the PC card and the increase, four-fold under VESA 2, of the speed for games.

Cumana will be showing the latest in PCI SCSI development for the Phoebe 2100. They will also have on show Digital Video Drives (DVD), *!CDBlaze CDRW* software and a range of parallel port devices. Watch out for some important announcements from Cumana and Cannon Computing at the show – you just might be interested!

Icon Technology will be showing their powerful, yet easy-to-use, wordprocessors *EasiWriter* and *TechWriter* professional. The latest versions have loads of new features including the ability to read and write MS Word 8 documents created using Office 97 & 98 and RTF. They also have the ability to read and write HTML complete with graphics and, in the case of *TechWriter*, equations.

Project Peanut from **IMS Ltd.** is due for release at Acorn World 98. It is the first portable RISC OS computer to be produced by a company other than Acorn themselves and the first RISC OS portable to be released since the Acorn A4 in 1992. Based around an ARM7500FE processor, Peanut is effectively an A7000+ in a portable case. It has a built-in floppy drive, 2Gb hard drive, 20 speed CD-ROM, NiMH battery, 88 key keyboard and glidepoint mouse all packed into a box which is only slightly larger than a ream of A4 paper.

Acorn videographics specialists **Millipede** are working on the design of a new high resolution PCI graphics card, specifically for Acorn's Phoebe. Time is tight but with luck it should be possible to have pre-production boards up and running in time to exhibit at the Acorn World Show. It is hoped to be able to integrate the board into the RISC OS sprite manager such that full advantage is taken of the blit copy features in order to perform blindingly fast window updates.

R-Comp and **Rheingold Enterprises** will be launching a new product, provisionally titled *SiteSeer*, which will fetch, store, manage and display whole websites, or partial selections. The product supports periodic updates, missing file updates, and complete re-fetches of individual sites, or groups of sites.

Once the site has been fetched it's available at any time with a click of the mouse – there's no need to go online, unless you wish to follow off-site links, or update it with the latest postings. R-Comp will also be showing the latest updated versions of all the *HTMLEdit Studio* family of products.

RCI will be launching two new leisure titles – Interplay's smash hit futuristic flight-sim/blaster *Descent*, and 3DO/New World Computing's *Heroes of Might and Magic 2*. This is a visually stunning fantasy/strategy game supporting up to six players playing together on the same machine, and includes two multi-mission single player campaigns, plus a large assortment of individual maps.

Fourth Dimension will be launching two new games. *Supersnail* is the snail with attitude – bounce your way around, collecting coins and taking on various unusual enemies. And *Morph* – a classic adventure game in the style of *Citadel* that has been over a year in the making. It will set new standards for future arcade adventures. They also hope to have available one or more compilation *RealMcCoy* CD-ROMs, including classic games such as *Bloodlust*, *Cyberchess* and *Carnage Inc.*

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Schools website comp:
schoolscomp@argonet.co.uk
(closing date 25 September 1998)

It's becoming clearer now...

Stephen Scott samples another approach to multimedia creation

The Acorn platform has a variety of commercial and public domain packages for producing hypertext documents and multimedia projects. Commercially, we have titles such as *HyperStudio*, *Genesis*, *Key Author* and *Multimedia TextEase*. On the other side of the fence, we have *StrongHelp*, *!PDF* and *ClearView*. All three of these involve using markup languages in a similar vein to HTML, so they are not really for the first-timer, more the seasoned professional.

ClearView is able to cope with more mixed media filetypes than *!PDF* or *StrongHelp*. Besides hypertext, *ClearView* can use *Ace* films, *Draw*, Sprite files and Clares' *Rhapsody* music files. Other filetypes require an external application with which to open them.

The software is presented on one floppy disc in a clear plastic bag with a 16-page photocopied and unstapled A5 manual. This same documentation is also available on the disc in *ClearView* format. It is always handy to have a printed manual, but the online documentation is more detailed and should also be consulted. One copy of the software entitles you to installation on up to four machines, unless you purchase a site licence, for classroom purposes.

ClearView runs from the iconbar and has its own filetype for its documents. These documents are created using a text editor. The only drag and drop you will find here is moving files between *Edit* and *ClearView*. The markup language consists of just 11 commands which are detailed in the manual, along with some example files to start off with.

In creating a multimedia document, all the associated files need to be in the same directory, for the *ClearView* file format refers to these files externally. You will also need to ensure that *ClearView* can see any applications which handle unsupported filetypes, otherwise you will be greeted with error messages.

Having written the file, it must be compiled by dragging it onto the *ClearView* icon on the iconbar. This file consists of the document body text, commands to set up the fonts used, the pathnames of associated external files, navigation and structure commands, for chaptering the text and linking to other Acorn applications.

A *ClearView* file divides text into passages, or what the manual refers to as *topics*. A minimum of two topics are imposed; one must be the first or main topic and the other must be an index topic.

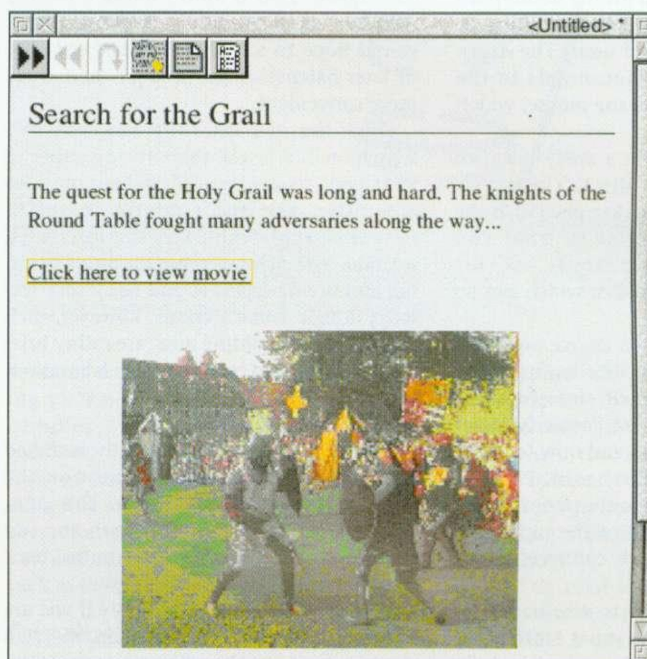
More complex files can be created, using features such as cross-referencing. A reference point can be inserted anywhere to point to a particular topic, visible or hidden – the equivalent of anchor tags in HTML design.

If you wish to distribute material with *ClearView*, you are restricted to the built-in filetypes it supports. This is only to ensure that your creation will run without querying the user for the location of an application they may not own themselves.

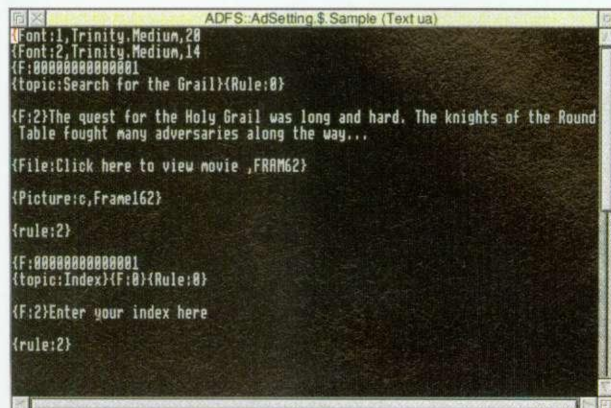
The main window contains a row of icons under the title bar. These allow you to move back and forth one page, to return to the previous page viewed, to search for an item, to create bookmarks, and to view the index topic of a *ClearView* file. The main window menu also provides these functions, along with a Print option and a save item, for creating the *ClearView* files themselves. This prevents having to recompile the scripts each time. These *ClearView* files can then be distributed with the supplied read-only version of the software, so anyone can read them.

The version of *ClearView* I have reviewed was dated 1991, when RISC OS 3.00 – let alone 3.1 – was barely off the ground. Therefore *ClearView* does not provide an updated design for post-RISC OS 3 machines – the icons are still in mode 12 and the windows themselves use old style template icons. Despite having a new distributor, nothing has been done to enhance *ClearView* to take advantage of newer machines.

ClearView is not meant to be the bee's knees in its category. There are much better programs out there ably supported by their authors. This program has not been touched for many years and a change of distributor will not hide that. If the developers, Binary Star, are still on the Acorn scene they would do well to give *ClearView* a thorough update, rather than to persist in selling it commercially. As it stands, *ClearView* may be just about acceptable as freeware, but certainly not as a product to buy.



... and drag the file into *ClearView* to compile it and display the end result



Create your document in a text editor, such as *!Zap*...

Product Details

Product:	ClearView 2 Advanced
Price:	£25 incl. VAT
Supplier:	ProAction c/o R-Comp
Address:	22 Robert Moffat, High Legh, WA16 6PS
Tel:	01925-755043
E-mail:	proaction@rcomp.co.uk
Pros:	Site licensing included in the price • PD version included for distribution • Good text handling and hyperlinking to other documents and files
Cons:	Looks outdated • Not easy to get into • Very basic multimedia capability • Should be freeware

Top marks

Stephen Scott gets to grips with a new release from ISV

The mouse is an awful device to use for computer drawing. It doesn't feel like a pen and doesn't operate like one either. A graphics tablet allows you to draw more naturally but, with an average starting cost of £100, a more cost-effective method was needed.

Enter *Penulator*, ISV's solution to the problem, for the Risc PC and A7000 computers. It was originally a PC product from Logic 3 and ISV have made it Acorn compatible by supplementing the supplied PC software with an iconbar-based utility for instant use, both on and off the desktop. So for the price, you get PC compatibility as well – a boon for PC card users. The Acorn software provides enhancements to the operation of the pen and the mouse, which I shall come to later.

The *Penulator* comes in a small box with some leaflets and two discs. The device itself resembles a big marker pen, with the end looking very similar to what you would find under any mouse – a soft opaque ball held in a socket, which can be removed for cleaning.

The pen is bent at a 45 degree angle for easy handling. On the side facing away from you, two buttons sit close together near where the fingers rest, formerly to act as each PC mouse button and now to act as Select and Adjust on the Acorn. Pressing both buttons simultaneously performs the Menu button action. Out of the top of the pen starts the lead which connects to the serial port.

ISV's documentation is disc-based, as opposed to Logic 3's printed leaflet. My assumption was that ISV wished to keep costs down. That is until I found a printed software catalogue in the packaging, so I would hope to see printed documentation in later batches of the product, as it is far more convenient.

Once the pen is connected, you can switch on and install the software either in your boot sequence or elsewhere on your computer. The disc contains the main *Penulator* application and the disc-based manual. The manual program offers printing and saving facilities and has a nice feel to its design. Some sections, however, such as the Troubleshooting area, are rather brief for my liking and require more elaboration.

Using Penulator

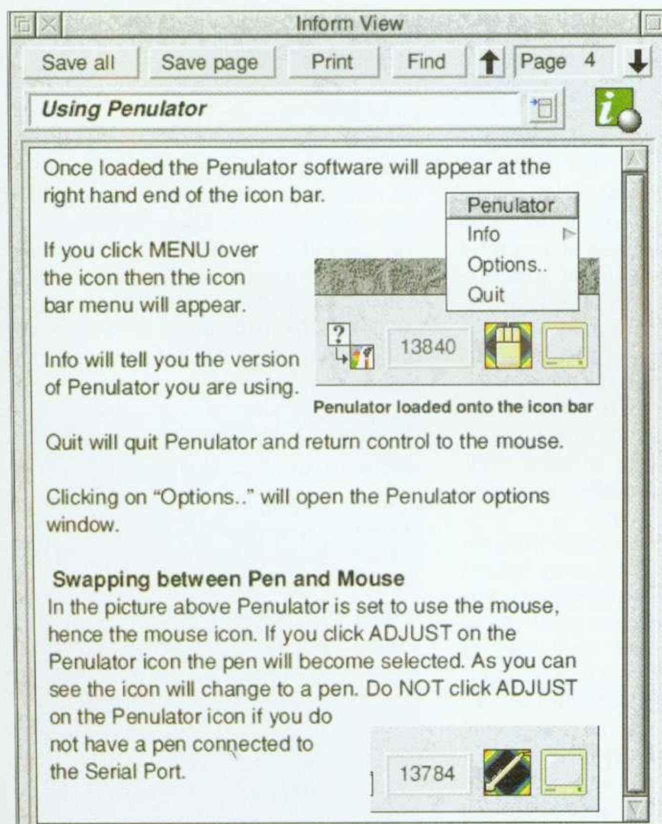
Once the software is successfully installed on the iconbar, a click of Adjust on the icon will switch control to the pen. Repeating the same action with the top button on the pen will revert control back to the mouse.

This operation is slightly fiddly if you are sharing a mouse mat between the two devices because the wire can get in the way. The pen's operation does take some getting used to but once you become familiar with it you start to wonder how you ever got along without it. It does prove that the mouse is not the best solution to user interaction with a computer.

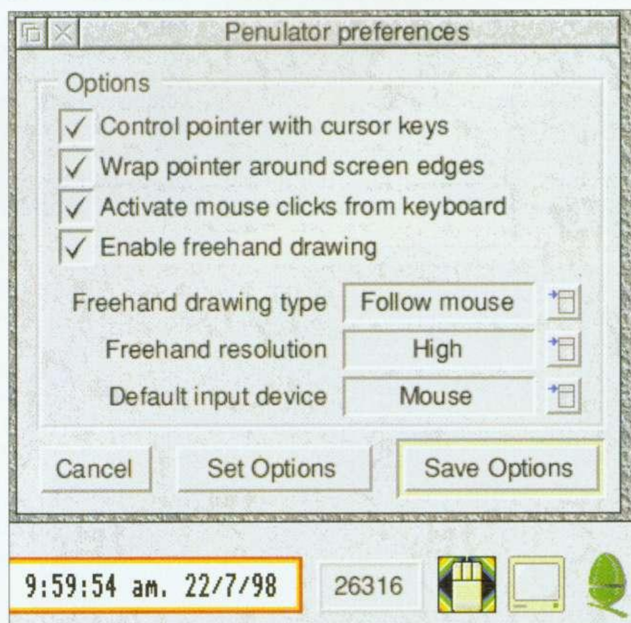
I used the pen over a number of days, not only with drawing packages, but Internet browsers, text editors and the desktop in general. Having used it extensively, I found two niggling irritations. Firstly, it does get uncomfortable after prolonged use – after all, it isn't shaped like any normal marker pen, so after a while you will probably want to revert back to the mouse.

Secondly, performing the Menu function is rather annoying. It was difficult pressing both buttons together without the computer thinking I'd only pressed Select or Adjust. If you are creating computer-based artwork, this can be particularly frustrating.

Luckily, the software provides an extra level of control from the keyboard, introducing the equivalents of the three mouse buttons. Holding down Shift with either the Insert, Home or Page Up keys will lead the computer into believing the mouse buttons are being pressed. The cursor keys can also be used to move the pointer, and hold-



ISV's disc-based manual window gives you online documentation

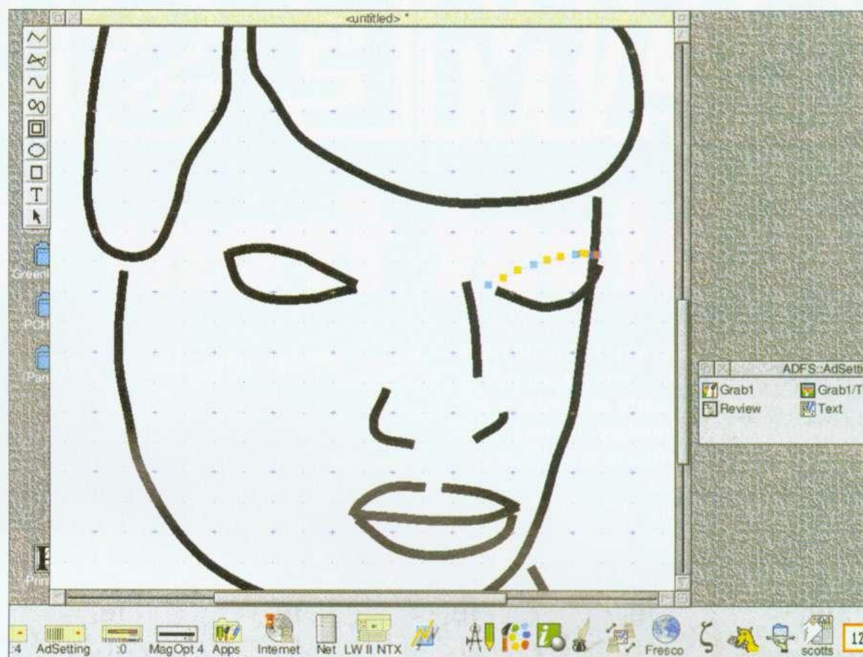


The Penulator's preferences window

ing down Ctrl moves the pointer faster. Previously possible only within *Draw*, *Penulator* now applies this feature across the desktop.

So in answer to the problem of the two pen buttons, I tended to press Shift-Home to display a menu and then use any pen button to select the required item. It does mean stretching your hand across the keyboard, but that boils down to the keyboard design, not a fault of the software.

All the above features and more are controlled from the Preferences window, available from the iconbar menu of the *Penulator* software. From here you can fine tune the operation of the pen, activate keyboard emulation of the mouse and also wrap the mouse pointer around the screen edges.



Using the Freehand Drawing feature to smooth curves in !Draw

Freehand drawing

One particularly good feature is freehand drawing. This exists in two forms – 'rubber band' and 'follow mouse.' Rubber band drawing is based on directional changes to the pointer, and is best used with the cursor keys within a vector drawing package such as *Draw* or *Artworks*; if the pointer is being moved left, and then moved up, a control point is inserted.

The follow mouse method allows rough drawings to be produced very quickly. By holding down Alt-F at the start and end of a pen stroke, the computer will read every movement of the pen. In *Draw*, this results in a lot of control points being placed to represent these subtle changes in direction. By using the zoom function of any drawing package, you can draw finer, more complex details, whichever method of freehand drawing you choose. It is this level of control that makes *Penulator* so enjoyable to use. Although features such as these are more suited to vector drawing, you can still apply it to bitmap packages such as *Paint* or *Photodesk* with equal ease.

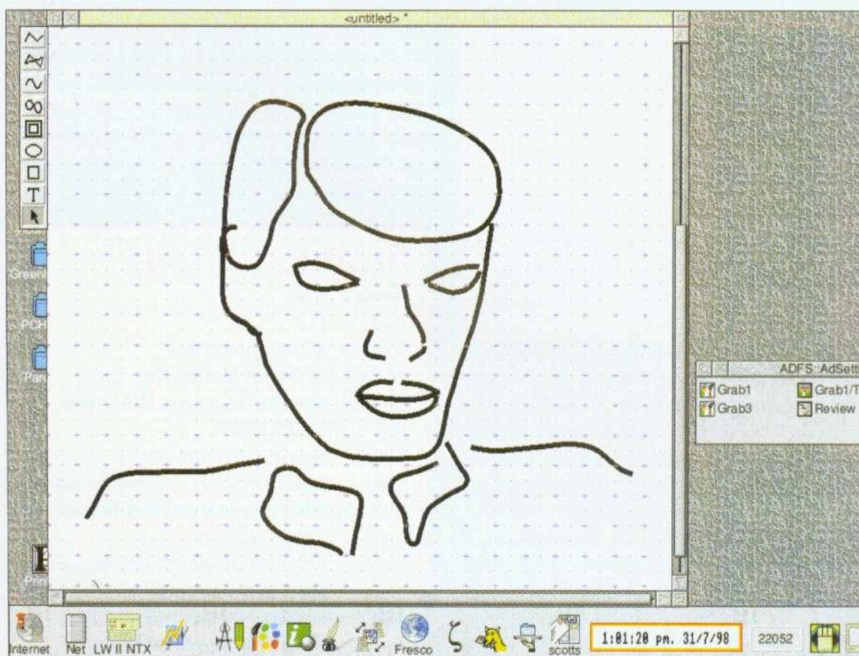
Conclusion

The only cloud on the horizon concerns the fact that the *Penulator* utility can clash with software that uses the serial port. This can include Internet software, so any such software may have to be disabled before use.

Despite taking precautions, I did experience severe problems on one of the Risc PCs in the office. A utility in the boot sequence was clashing with the software, making only the keyboard control work. With this I could revert pen control back to the mouse. However, a long telephone call to ISV solved this problem and the offending module was removed from the computer.

Having used this product quite rigorously, I am very pleased with its operation and would make it an essential purchase. The pen is easy to handle, yet I feel that the buttons are positioned a little incorrectly when it comes to trying to press them together to bring up menus (either that or I am the only person who holds a pen incorrectly). And the positioning of the lead does get in the way.

To conclude, these minor gripes do not effect my opinion of the *Penulator* being a very worthwhile product, and I would therefore recommend it wholeheartedly. AU



The finished result. An admittedly bad drawing, made much better using the Penulator

Product details

Product:	Penulator
Price:	£35 plus carriage
Supplier:	ISV Products
Address:	86 Turnberry, Home Farm, Bracknell, Berkshire, RG12 8ZH
Tel:	01344-455769
E-mail:	atimbrell@aol.com
WWW:	http://members.aol.com/isvproduct/
Pros:	Ease of use • Fairly comfortable to handle • Offers better drawing capability over the mouse • Well-designed software • Keyboard controlled mouse pointer • PC software included
Cons:	Lack of printed documentation • Clashes with serial port utilities • Lack of Menu button • Risc PC and A7000 only

GAME SHOW

A blast from the past

Teri Paul tries her hand at a brand new version of *Frak*

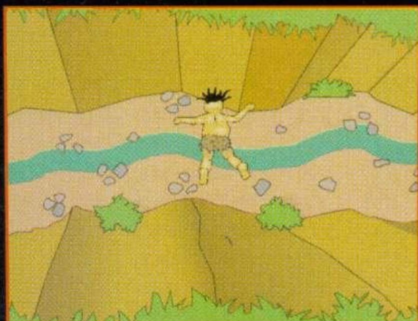
Long long ago there was a caveman who had three lives, which was just as well as he lived in a perilous world of monsters and enormous owls. Fortunately, he was quite agile and found it possible to avoid such perversions of nature. So what was our prehistoric ancestor looking for? Food, fire, shelter?

No. He was looking for keys. You might wonder what a man with no visible support apart from a loin cloth needs with a bunch of keys. But then no one ever pretended that ladders and level adventures had to have a feasible plot. Which is a shame as I'd like to know how the knives, balloons and yo-yos got in there.

I conducted a straw poll to see who remembered *Frak*. Some quite respectable *suits* went all misty-eyed, but then we got into a discussion about whether the Electron version had an Editor and whether the musical accompaniment was the theme to *Captain Pugwash*. As I write they're scouring back issues and the Internet for answers.



But what of the new version? *Frak* is a rather rat-faced little creature with a strange gait who must leap, climb and walk around a strange land of rocks, ladders, vines and tree trunks. Rocks are the home to monsters, while tree trunks house owls and, if you bump into them, you lose a life. However, you have a yo-yo which extends quite considerable distances depending on how long you hold down the relevant key. To add a little spice, balloons come up from the bottom of the screen and daggers cross it diagonally. Let them hit you and you lose a life. You can avoid these or hit them with your trusty yo-yo.



In addition light bulbs give you extra time



and you'll need these as the screen goes black and you lose your footing. I like the way that if your timing is slightly off but you can remember the route, you can still get to a new light bulb or that final key which will take you to the next screen.

As the original version only had three levels it was not thought necessary to have extra lives. For less seasoned games players out there this is very annoying. A new level doesn't give you a new and complete set of lives, there are no lives to collect and there is no save option so you have to complete the whole thing with your three lives. It's challenging and with rocks to collect to boost your score it can be quite difficult to get the high-score you think you deserve.

The Editor extends the life of the game allowing you to make as many levels as you want. The tools of the trade: Rocks, trees, ladders, vines, keys, bulbs and monsters are shown as icons. You then choose the start position and play or test. Yet these are tiny, not very clear, icons and go nowhere near doing the machine justice.

There are some predesigned screens to load, edit or play but, even if you just look at the Editor screen, you can't then go back to the game without reloading the whole thing – annoying.

As I keep going back to play *Frak* it must have some of the elusive quality of the original, but it doesn't have all its charm – though that might be the mists of time talking – nor has it been updated for 1998. The background is blank, the characters don't animate and there aren't the variety and number of levels we expect having played *Zool* and *Magic Pockets*. *Frak* is an institution and, for any serious games player, something to add to your shelves as a reminder of how the format has developed over the years.

Product details

Product:	Frak
Price:	£15
Supplier:	RComp Interactive
Address:	22 Robert Moffat, High Legh, Knutsford, Cheshire WA16 6PS
Tel:	01925-755043
E-mail:	proaction@rcomp.co.uk
Pros:	Ahhh memories ... • Plus the Editor lets you create and play to your heart's content
Cons:	Not state-of-the-art and for purists some of the original features are missing • For new players the inability to save is irritating

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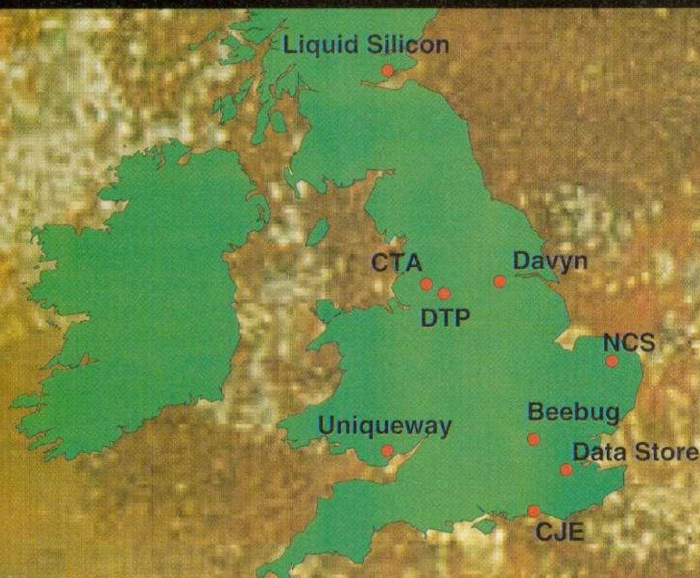
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Key :

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IK	Includes Key+
PB	Picture Base
WS's	Worksheets

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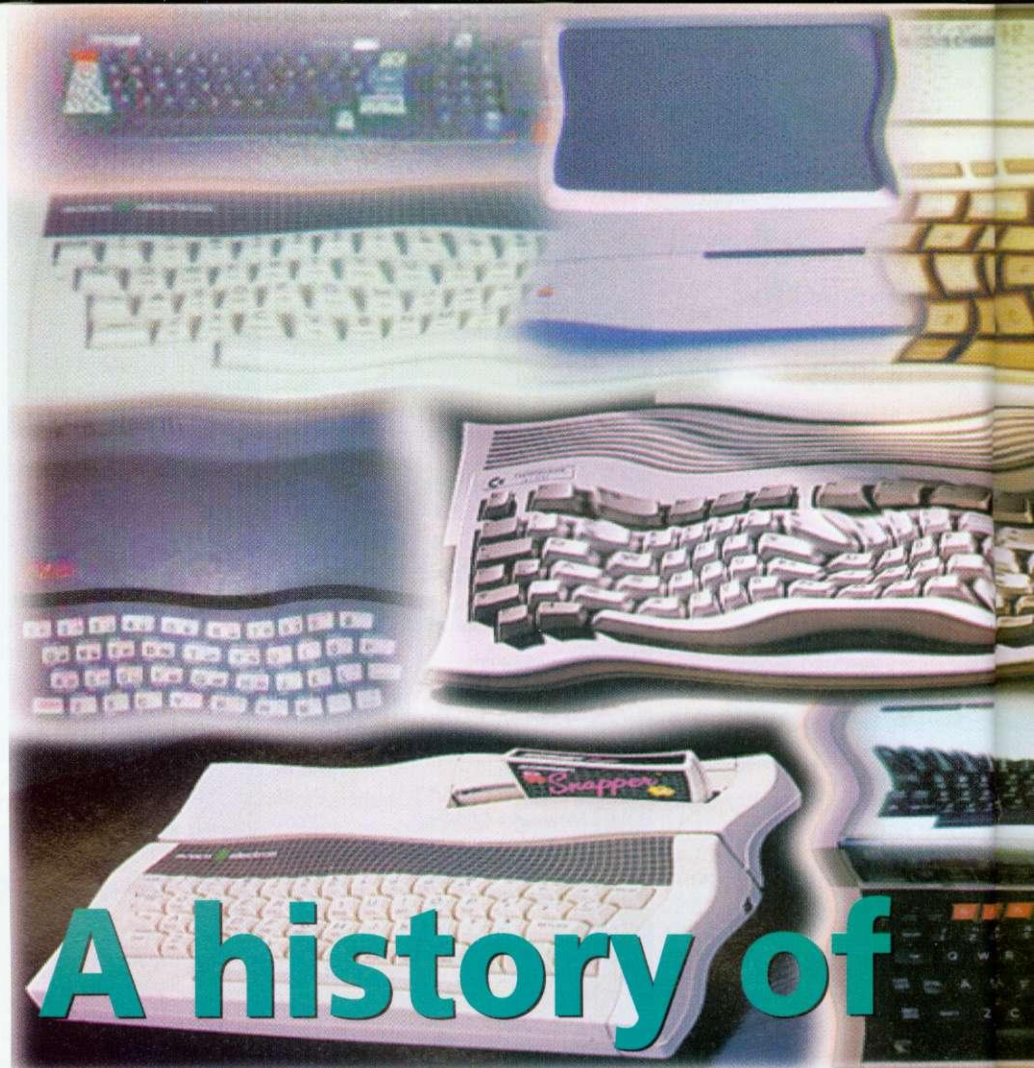
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A history of RISC – part 2

IBM threw away 150 man-years of advanced R&D when the 801 Project was abandoned. But in 1979 it stood alone in RISC. If it had acted then, it could have destroyed Apple with a 2-3MIPs RISC-based PC; it could have struck DEC a mortal blow by firing RISC-cannonades at the VAX; and it could have shifted the world to superior technology. Instead, it later found itself being shifted by others.

801 resurrection

In 1985 they were forced to resurrect the 801 team so as to avoid being seriously damaged by the dwarves, who were not only doing RISCy things themselves but were in cahoots with a growing band of tough hunters, the likes of DEC who were using the dwarves' products to launch RISC boxes with a vengeance. The dwarves had begun to work the abandoned RISC mine in 1980/81.

Joel Birnbaum, one of the 801 team, was so angry at the cancellation of the 801 Project in 1980 that he went to Hewlett-Packard and started them on the march to what they first called Precision Architecture, then PA-Risc, then plain RISC.

HP were the first major vendor to commit their future to RISC, making them the prince that kissed Snow White back to life. They put a huge effort into their PA-Risc project, which became the biggest in the company's history – at one point involving 600 engineers – drawing on Birnbaum's experience at IBM, the research by then going on at Stanford and Berkeley, and work being done at MIT.

Introducing RISC

In 1980, at the University of California, Berkeley, Dr David Patterson and his team began a RISC project, inspired by an aversion to the complexity of the VAX and the Intel 432, the lack of experimental evidence in architecture research, rumours of the 801 and the desire to build a VLSI machine that minimised design effort while maximising cost/performance. Berkeley's first machine had 40-odd instructions. It was called RISC, the first time that term had been used.

Berkeley then concentrated on building a machine with the absolute minimum of instructions, at the same time greatly increasing the number of general registers. The most damaging feature of most CISC chips is the insufficiency of registers – the CPU's working storage – because without them optimising compilers are impossible. These RISC researchers found that, ideally, 24-28 registers are needed for integer calculations and 12-16 for double-precision floating-point. But an 80386 chip had only eight integer-registers and a 680X0 only sixteen.

MIPS project

In comparison, the MIPS R3000 RISC-chip, a top-gun RISC contemporary of the 80386, had 32. In 1981, a team at UC Stanford, led by Dr John Hennessey, began the MIPS project (Microprocessor without Interlocked Pipeline Stages), which tried to extend compiler-optimisation techniques, explored pipelining and used VLSI to build a fast microcomputer.

Both universities produced working chips using much less manpower and time than traditional microprocessors – both received funding from the Defence Advanced Research Projects Agency, DARPA, the so-called 'Star Wars' effort.

Faster and faster

Berkeley's Risc-I and Risc-II were produced in 1982 and consistently benchmarked faster than a VAX 11/780. Stanford's MIPS was produced in 1984 and ran five to six times faster than an 8MHz 68000 under the same compiler. A year later a 4MHz MIPS chip was out-performing a 16MHz 68020. The RISC systems produced at Berkeley had multiple register-sets arranged as 'windows' and were the basis for Sun's SPARC design.

The Stanford research focused on single-cycle instructions and optimising compilers and was the basis of the designs produced by MIPS Computer Systems, the company later co-founded by Hennessey, and since taken over by Silicon Graphics. The mid-1980s saw all that R&D bearing fruit. RISC began to accelerate into the marketplace. Pyramid, which had based their development on Berkeley's design-philosophy, launched the first commercial RISC machine in 1984.

1985 saw a flurry of announcements: Hewlett-Packard announced PA-Risc in April, the first major RISC unveiling. That jolted IBM into announcing the RT several months later. MIPS Computer Systems also announced the Stanford-based R2000 chip. All three companies released their systems in 1986. Also in 1985, what remained of IBM's 801 research team was reconstituted under Cocke to study machine architecture again.

SPARC-MIPS design wars

The first result was that hurried dusting-off of the RT; then came 'second-generation' RISC, the AMERICA architecture, around which development of the RS/6000 and other products began. Sun, who adhered to Berkeley's RISC architecture, announced their SPARC chip in 1987 and the SPARC-



Nobilangelo Ceramalus continues to trace the development of RISC through the 1980s and the ARM chip up to the present day

MIPS design-wars began (tests done in 1988, by Berkeley, showed that MIPS had the edge because their compilers generally produced fewer total instructions). In early 1988 MIPS announced their R3000 and Motorola their 88000. Later the same year DEC chose MIPS for their first RISC machines.

The MIPS R3000 exemplified some of the main differences between RISC and CISC. It contained an efficient 115,000 transistors; an 80386 already had 350,000; later Intel chips became even more bloated. And on a 25MHz clock an R3000 produced a then staggering 20MIPs; an 80386 managed just 4MIPs. Intel's attempt at RISC, the i860, was announced in mid 1989. MIPS announced their R6000 a few months later, the first commercial RISC CPU on ECL (ECL allows more power in the same area and faster switching, so triples or quadruples processing power).

IBM announced their POWER chipset – Performance Optimisation With Enhanced RISC (the heart of the RS/6000s) – in February 1990 and released the RS/6000s themselves in mid year. POWER had seven or nine chips in the set, depending on the implementation. So, as the 1980s drew to a close and ticked over into the 1990s, vendor after vendor announced either 'new' RISC machines or a choice of RISC platform for future products. Reactionary sneers from CISC adherents faded and all-but disappeared when IBM's RS/6000 put the Big Blue stamp of approval on RISC; and Silicon Graphics' huge successes on the movie screen could not denied.

The dwarves and hunters had flexed their muscles in ways that could not be ignored. IBM's first reaction in 1986, to release the RT – seven years late – had met with little success. It was undersold; it was marketed as a technical workstation, a task for which it was not well-suited (but IBM Australia, by portraying the RT as a commercial machine, had good success, and sold 1000); it was also over-priced and under-powered; and its long wait on the shelf meant it was soon out-performed even by CISC machines. PCs always represented a great opportunity for RISC technology, with potential sales of hundreds of millions.

Launch of Archimedes

IBM, having killed a RISC PC in 1979, finally released their RT, but not as a PC. The world's first RISC PC was of course the 4.5MIPs Archimedes, launched in 1987 by one of the smallest 'dwarves', Acorn. Acorn had foreseen in the early 1980s that 16-bit machines were a passing phase, that RISC would one day reign supreme. It was then making the 8-bit 6502-powered BBC micros.

The company looked at several chips to use as the platform for its next generation, found them wanting and in 1983 began to develop its own 32-bit RISC chip, the ARM (Acorn Risc Machine), which is now made under licence by a long list of chipmakers – including, ironically, Texas Instruments. Acorn's RISC development was largely the work of three people: Sophie Wilson, its chief programmer, who designed the ARM instruction-set, Steve Furber who designed the ARM, and Jamie Urquhart, who was the VLSI design manager.

ARM's development

The first production ARM, the 2-micron 8MHz ARM2, appeared in 1986 and averaged 4.5MIPs (3.5 specmarks). Jagger's thesis research showed that its design could not be bettered (but humans have afterthoughts, so we now have the StrongARM). The 1.5-micron ARM3, which appeared in 1989, did round 22MIPs (16.7 specmarks) on a 30MHz clock. In 1991, shortly before taking up a position at ARM, Jagger predicted that a 0.5-micron CMOS ARM3 would run at 100MHz and produce 60-70MIPS, so the path that would ultimately lead to the StrongARM and beyond was already becoming clear.

The first ARMs held the record for the smallest number of instructions in a commercial RISC chip: 31 in the ARM2 and 32 in the ARM3, divided into 11 classes. This is a record that the StrongARM still holds, even though its instruction set has been tweaked – it uses the ARM V4 instruction set.

Apple, who had been conspicuously absent from the RISC race and had only indicated that they would have a RISC machine some day, surprised observers in December 1990 by forming a joint-venture company with Acorn, ARM Ltd (Advanced Risc Machine, which is what it aimed to build).

A parallel development of the ARM began at Manchester University in the early 1990s under Furber, who had moved there from Acorn to take up Manchester's prestigious chair of Computer Science. He headed a team that developed the Amulet: The asynchronous ARM – a microprocessor without a clock, in which each instruction runs as fast as it possibly can, instead of being regulated to a fixed speed. In a conventional clocked chip, the clock speed is set to the speed of the slowest instruction running the worst-case data.

That not only slows the whole chip down, it also means that it is always consuming power, because the clock runs continuously, so pulses of current are being generated continuously. In a clockless chip, pulses of current are only generated when work is done, so power consumption falls dramatically, especially when it's not doing anything.

Angry regrets

Looking back over RISC's history can only cause angry regrets. The 15 year journey from IBM's discovery of RISC in 1975 to the RS/6000 in 1990 would have taken less than five if its executives had allowed it. Scores of millions of PCs would be powered solely by RISC, not antiquated CISC.

Intel and Microsoft would at best be sideline companies, not lords and masters of the silicon universe. Open systems would be much further advanced. And RISC would have climbed to uncertain heights, because RISC developers use the power of each generation to develop the next, making progress exponential.

Centre stage in the future?

If we had had RISC 10 years earlier we would have technology today that we cannot hope for until the year 2001 at best. But, as they say, what goes round comes round, a fact of life that has been underlined by events that were unfolding as this article was being completed. Intel, who bought Digital's chip-foundry, have licensed the StrongARM.

The comment of an American analyst, James Turley, of MicroDesign Resources was, 'On the surface, the StrongARM is an ideal fit for Intel. It's everything Intel's chips are not: Fast, inexpensive, low power.' Perhaps an accidental by-product of American corporate power-plays will, after all, move RISC, Acorn flavour, to centre stage where it belongs. AU

Secret life – part 2

Paul Skirrow lets you in on some more tips for successful Internet use

Last month we looked at Marcel and e-mail as well as using Acorn's new *Java* and *Browse* CDs. This month we concentrate on *Fresco* and the Web.

Save the URLs

A Universal Resource Locator, or URL, is simply a pointer or address of something on the Internet such as a Web page or a file. The URL is divided into several parts as shown in Figure I. The transport indicates how it should be fetched and this is usually http (hypertext transfer protocol) for Web pages or ftp (file transfer protocol) for files. Most Web browsers, including *Fresco*, can use either protocol while an ftp program can normally only fetch files using the ftp protocol.

URLs can be entered into *Fresco* by clicking on the Fresco icon and then typing them into the URL space. Alternatively, they can be entered using Open URL on the Fresco menu and this has the advantage that it doesn't open the default *Fresco* Web page first. Most URLs start with the same 11 characters: 'http://www.' and there have been several unsuccessful attempts by journalists and broadcasters to give these characters a meaningful name which is easier to pronounce.

Fresco has the useful ability to enter these characters automatically when you press the Tab key as does *!Browse*. So it would then be possible to refer to them as 'Tab' and my Web address could then be pronounced as 'Tab octosys.co.uk' which is ➤

http://www.octosys.co.uk/download/java.html

Transport Host Directory Filename

Figure I: Components of a URL

much easier to say over the phone. Similarly, Shift-Tab may be used to enter 'ftp://ftp.'.

There are several ways of saving Web pages and references to them. You can either save a reference to the page as a URL link or you can save the page contents as an HTML file, a text file or a Drawfile. The former is useful for pages which frequently change (such as BBC TV programme listings) while the latter is useful where you want to save a page to disc for future reference without going on-line.

The easiest way to save a link is to click on the hotlist button to add it to your hotlist. You can also save a link to a file or to another window using the Save->Link menu and this is especially useful if you want to include a link from one of your own HTML pages as it includes a full HTML reference.

Alternatively you can save the link by simply clicking over the URL address and dragging it to another window. This is especially useful when you want to include a Web address in an e-mail message. It can also be used to transfer the URL to a different browser, such as Acorn Browse, and I sometimes do this to check the appearance of a page in a different browser (either a page that I am creating or occasionally if I encounter a page that doesn't look right in *Fresco*).

Separate image files

If you save a page as an HTML file you can double-click on it later to retrieve it but this will only recover the HTML file and any images on the page will be lost. This is a common limitation on most browsers (including PC browsers) although it is very frustrating for users who expect to be able to save the whole page in its entirety with all its images included. The problem arises because each image is stored in a separate file.

It is possible to save each image to the same directory as the HTML file using the Image->Save Original menu and *Fresco* simplifies this process by automatically saving files to the same place as the previous file when the OK button is clicked (i.e. you don't need to drag each file to a directory window).

It is still quite tedious though, especially if the page contains several images and it is not always obvious which items on the page are actually images (images are often used for rule-offs, menu, buttons and bullet points).

Saving a page as a Drawfile can be useful as it saves all the images within the page although it can be quite difficult to manage for very large pages and when it is loaded into *Draw* you will obviously lose the ability to click on any links on the page. Saving a page as a text file is useful when you want to include the text in a wordprocessor document and the save text window can quickly be accessed by clicking on the save icon with the Adjust (right-hand) button.

WebTool

A better way of saving pages is available if you buy ANT's *WebTool* program. This works alongside *Fresco* and, once installed, the two buttons marked 'with images' and 'all frames' in the *Fresco* Save window are enabled (see Figure II) so you can save a single page in one go even if it contains several frames and images.



Figure II: Saving a page with images and frames

WebTool is quite clever as it will fetch several files and save them all within an application type directory (i.e. a directory that starts with an exclamation mark) and files are renamed as they are fetched to ensure they fit in the 10 character RISC OS filename limit. It can save a single page with all its images (and frames) or it can save a whole site with all its pages (this can take a while and there are some useful options to avoid large files, or just update a previous save with the pages that have changed).

You can double-click on the saved directory to see the contents or you can use the Help menu over it to see the details of the fetch which includes the original address the page was fetched from (invaluable if you've forgotten it and want to check to see if the page has been updated). It also includes a list of the filename mapping showing you what each file was originally called and what it was renamed to during the save.

Improving the appearance

I'm still amazed at the number of unreadable pages that I encounter and the result is invariably because the page author has chosen an unsuitable background colour or texture. Nobody would consider printing advertising leaflets or newsletters on wallpaper and yet the Web has some truly awful pages. Fortunately hideous backgrounds can easily be removed by simply pressing shift-F5 and this option, along with several others, is also available on the Display menu as Background Colours.

You can improve the appearance of colour photographs by using a screen mode with 32 thousand colours. If you do this you should also ensure that the 'Use more colours' option is turned on. This can be found by clicking on Choices on the iconbar menu and then clicking on Display options. If you only use a 256 or 16 colour screen mode this option may be turned off to save memory (in earlier versions of *Fresco* it was essential that it was turned off as it could make images look quite poor in 16 or 256 colour modes, but this has been fixed recently).

Superhighway speeding

With a fast modem and a good Internet Service Provider it is possible to achieve fast Internet connections that rival those available to individuals in large corporations. Several people from the local BT Labs have commented on the speed of my system – although their site has fast high bandwidth connections to the Internet, it is being shared by a lot of users. Another factor is the time a Web server takes to

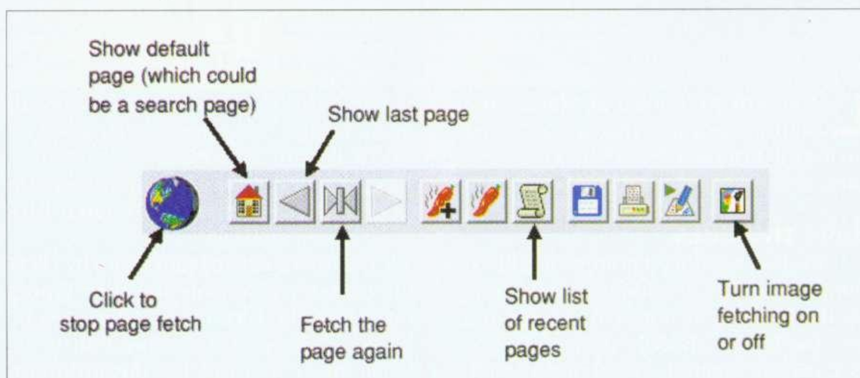


Figure III: Fresco button bar

respond to your request and send a Web page and this will be the same for all users regardless of their connection rate.

Images slow down Web browsing more than anything else, but they can easily be turned off (see Figure III). Websites look rather dull without any images, but the sheer speed is quite refreshing and you can jump from link to link without any distractions. This is invaluable when you are searching for a particular piece of information on a large website and you can always turn on images and re-load the page when you find what you were looking for.

Sometimes a page takes a long time to appear and this might be because the Web server sending the page is very busy or because the connection through the Internet is being held up by a particular gateway. Quite often a click on the Reload button (Figure III) to fetch the page again will use a different route to the Web server and the page will appear much more quickly than if you had waited for the original fetch.

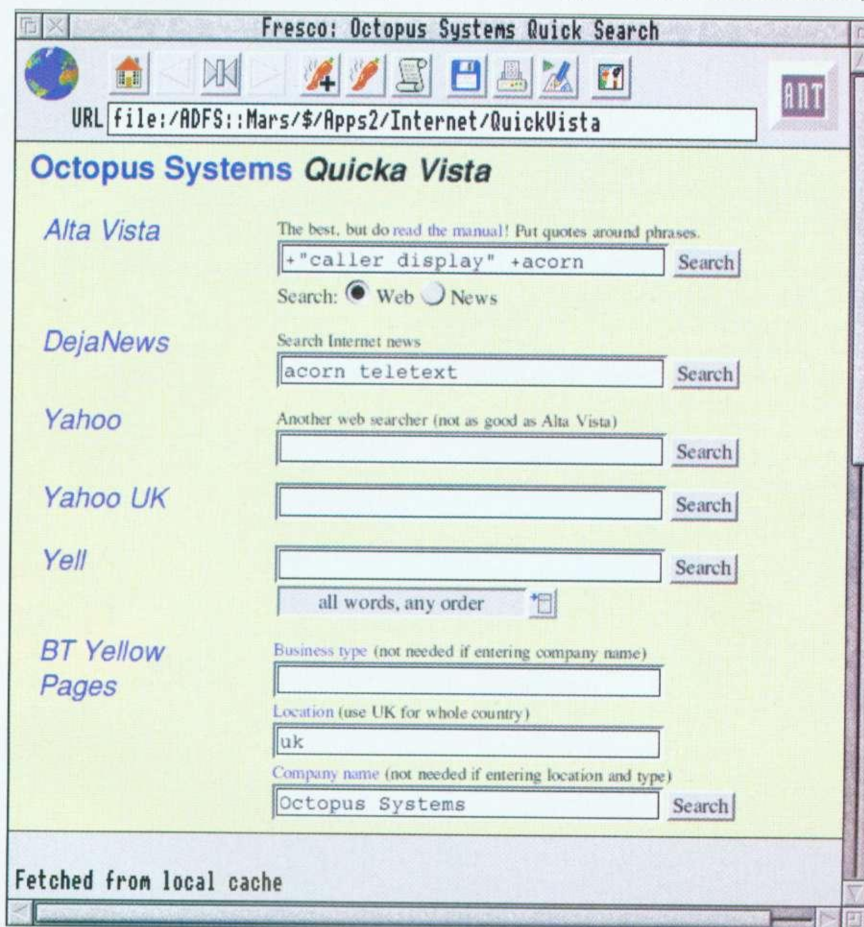


Figure IV: The QuickVista search page

Quicka Vista

I'm a big fan of the Alta Vista search engine at http://www.altavista.digital.com/ which I wrote about in the August 1996 issue of *Acorn User*. Alta Vista is already very fast but to make it even quicker I use a special *QuickVista* file that contains an Alta Vista search form as well as forms for accessing other search engines (see Figure IV). Instead of going to the Alta Vista site to fill in the search details every time, a double-click on *QuickVista* produces the form immediately so the search details can be entered while waiting for the modem to dial.

The *QuickVista* file also includes search forms for DejaNews, Yahoo and BT Yellow Pages. Enter the search text into one of the boxes and press Return (or click the Search button) and the query will be sent to the appropriate search engine. The Yellow Pages system is quite useful as it can find businesses anywhere in the country, even if you don't know which area they are in.

To use the *QuickVista* file (see Box) you should copy it to your Internet directory. You can even make it your default *Fresco* page by editing the 'document.default:' option in the '!Fresco.Config' file. Replace 'Welcome' with '^.^.QuickVista' and *Fresco* will show the *QuickVista* search page whenever you click on it, or when you click on the Default page button (Figure III).

Although you can enter details into the *QuickVista* file before connecting to the Internet, you obviously won't be able to start a search until you have dialled and are on-line. Alta Vista is the best search engine to use for searching the Web as it is extremely fast and now indexes over 150 million pages on the Web with the index growing at around 10 million pages every month. For best results it is important to read the manual and make use of the invaluable facilities for specifying searches precisely.

For example, to restrict a search to Web pages that are hosted in the UK, just add a space and then +host:uk to the end of your search (Do be aware though that this will exclude many UK companies such as Acorn who have shunned the 'uk' domain in favour of the American/international domain 'com'). Similarly, to restrict newsgroup searches to Acorn newsgroups just add a space and then +newsgroups:acorn to your search string.

Removing the adverts

The Alta Vista search engine is free and is partially paid for by advertising on the Alta Vista page. Although the adverts are fairly small they still take a while to load and make searching slower than it would otherwise be. However, *Fresco* has a cunning feature which lets you ignore these adverts to speed up your search. Simply open *Fresco* Choices, click on Network Choices and enter the following comma separated strings in the Images to defer box: ad.doubleclick.net,/advertising/,/Banners/,/ads/

Click on the Set button and then the Save button to save the new choices for future use and the adverts on Alta Vista (and some other sites) will be replaced by an empty box although you can still force *Fresco* to fetch the image by using the Image->Reload menu over it. This feature is explained further under Image blacklisting in the *Fresco* help.

And finally...

I hope these articles have helped even though they have only skimmed the surface. If you want to explore further a good starting point is the ANT website which has a good selection of add-on programs in the third-party software area: http://www.ant.co.uk/support/faq/third-party.html

In particular the *Zap* editor is superb for editing e-mail messages in colour, *PDF* is useful for displaying Adobe Portable Document Files which often appear on the Web, *IRClient* enables you to join Internet relay chats and *SoundCon* is useful for playing sounds on Web pages. Many of these are public domain or shareware and work extremely well with the ANT suite. AU

Files to fetch

Several useful files are mentioned here and you can find them on the cover disc or download them from:
http://www.octosys.co.uk/download/inet.bin
The files are:

JavaOff	Disable Java so it won't be automatically run
JavaOn	Re-enable Java
QuickVista	A default page set up for Internet searching

Game conversion

GAME

Syndica

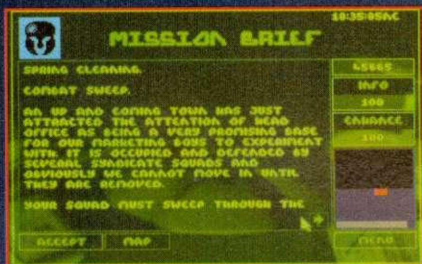
Steve Mumford plays R-Comp

Bullfrog have a history of creating games that broke the mould. The classic example is probably *Populous*, an isometric three-dimensional strategy game, which allowed the player to become a deity for the afternoon.

R-Comp Interactive's latest conversion is also a Bullfrog title, so those of you who are familiar with their other works should be expecting something good. I certainly wasn't disappointed, but I've been a fan of *Syndicate* ever since I managed to install it on a rather tired PC card. For those of you who haven't heard of it before, read on and all will be explained.

Controlling the action

Syndicate is another of those games in which you play the overseer; however, this time around you're in charge of one of a number of criminal syndicates battling for supremacy in a post-democratic world. The main aim of the game is to expand your chosen syndicate and conquer the world through discrete



manipulation or brute force – sometimes the old methods are the best.

Although you're cooped up in an airship floating high above the target city, your operatives down on ground level are almost fully under your control via a command interface that was the forefather of more recent games such as *Command & Conquer*. The control mechanism, while allowing precise control of the agents in question, also provides a certain degree of automatic response, enhancing the feeling that the operatives are mind-numbed humans rather than simple computer characters.

This autonomy was created by modelling each agent with three 'hormone' levels – Adrenaline, Perception and Intelligence. By modifying these levels for an individual or the whole group, their reaction speed and behaviour can be controlled to produce hyper-accurate agents who can spot danger and take evasive action or ultra-loyal fighters who will follow every command without thought for their own safety.

Careful manipulation of these levels is required to complete the missions with the greatest panache, although it's possible to steam through the first few without needing to rely on them too much. With the ability to control up to four agents at once, the interface allows individual movement of the operatives if necessary, or in a group if more convenient. The isometric three-dimensional map takes up the bulk of the screen, with a small radar overview and a status window filling the rest. Each agent can carry eight items, and the active object can be switched with a click of the mouse.

In battle, enemy agents are targeted with the mouse pointer and the right mouse button allows you to open fire with whatever weapons you have at your disposal. Pressing both mouse buttons together throws the agents into 'panic mode' in which their hormone levels are pushed to the maximum; they'll then open fire on anything they see as a threat, and in general terms that's enough to make a mess.

The usual problem with games in this genre is that the results of one mission generally don't have any great effect on those that come after it; there's no sense of continuity and the player quickly becomes bored. *Syndicate* tackles this in two ways, both of which are quite effective.

Firstly, the importance of money management is stressed throughout the game –



without sufficient credits, it's impossible to research new weaponry, modify and equip agents or even reload guns. Get caught with a low bank balance and you'll find that a formerly simple mission takes on a whole new level of complexity. Money is generated by taking taxes from the areas you've captured as well as charging ransoms for any citizens kidnapped in the course of a mission.

The other constant throughout the game is your team of agents themselves. As long as they don't get killed, the same agents are available from the syndicate's cryovat, meaning that over the course of time it's possible to specialise chosen agents for different tasks, and physically enhance them by making use of the range of cybernetic add-ons which are available.

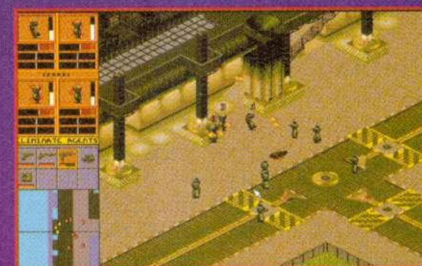
It's always quite upsetting to watch one of your favoured operatives disintegrate in a stream of heavy crossfire, and after a while you can become quite protective towards them. Put all of this together with futuristic hologram-style menu screens and a freeform mission structure that provides a wide range of challenges, and you have a game that can really capture the imagination.

Research and development

A wide range of weaponry exists in the *Syndicate* world, although you don't get to play with it all at the start of the game. Making do with pistols and rifles for the first few missions, you must gar-



ner credits and put them towards research in your syndicate's technical laboratories. Developments are made over a period of time; rushing advancements are possible, although be prepared to lose cash hand over fist if that's your technique. There are two main



SHOW

ate Plus

p nteractive's la t conversion target

research streams to follow; the first will provide you with new and enhanced weaponry, from Uzi sub-machine guns to flamethrowers, lasers and rocket launchers.

One such invention that's been made available at the start of the game is the Persuadertron, a device that alters and controls the minds of any citizens you bump into. Its effects are cumulative, so that with a certain number of ordinary citizens under your control, it's possible to 'persuade' police to your way of thinking. Even enemy agents can be captured given enough support, and they are then brainwashed and added to your cryovat, increasing your own stock of operatives.

The second allows improvements to be made to the actual cybernetic modifications you can add to your agents – increasing their durability with in-built body armour and larger hearts, their speed and capacity with metal-alloy arms and legs, and their intelligence and perception with better brains and eyes. These alterations have a profound effect on the gameplay; a larger brain means 'persuading' your enemies becomes a simpler task, and the later chest upgrades provide the agents with a devastating self-destruct feature should they have the misfortune to require it.



Level design

One of Bullfrog's major skills at the time that they created *Syndicate* was the amount of detail and atmosphere they could capture in the 16-colour VGA landscapes they designed; each city has a different character and structure, ranging from the simple, wide walkways in the earlier stages to the multi-level cities that crop up later in the game, complete with flickering neon signs, busy roads, train stations and aerial monorails.

Bewildering to the beginner, these vast conurbations provide plenty of locations for ambushes and firefights, and the missions take advantage of all of these features. Hopping in a car or train to speed the journey becomes a regular occurrence, and it's this constant interaction with the scenery that helps bring the game to life. The actual missions can range from a simple combat sweep, ridding a town of any enemy agents, to sophisticated assassination attempts in which informants must be found and protected before they reveal the true target.



My only complaint is that the isometric view can be obstructive in places; for instance, once your agents are within a building, it's impossible to see them and keeping them under control and out of danger requires a skilled hand. The computer power available at the time of *Syndicate*'s creation didn't allow realtime 360° rotation of the city landscapes; understandable, but a shame nevertheless.

Final words

The conversion is a complete success; the feel of the game remains intact and useful features such as multilingual support have been carried over. RCI have chosen to base their conversion on the Syndicate Plus PC compilation, meaning that as well as the original *Syndicate* game you also get the *American Revolt* extra mission pack – much tougher than the original, these levels will keep you going if you're looking for a serious challenge. A word of warning to the uninitiated – don't attempt them until you're ready. However, you're provided with a comprehensive, stylish manual that holds all the information you'll need, and careful study should improve your chances of survival.

Another positive point is that RCI's conversion of *Syndicate* doesn't demand tens of megabytes to run; although it's possible to install the whole game onto hard disc, taking around 14 megabytes, *Syndicate* will run happily with less than one megabyte resident on the computer; the rest is spooled from CD-ROM. The only disadvantage to this compact installation is that with a slow CD-ROM drive, the movies tend to look a bit rough.



Syndicate is a worthwhile addition to anybody's games collection; a true PC classic, it retains its addictiveness, explaining why it's still on the shelves. This is really my main cause for concern – buying this game as a PC budget release would cost around £12 – £14, so the Acorn price of £29 could be seen as expensive.

When I previewed this game, I mentioned that I was looking forward to comparing the Acorn and PC versions – as RCI supply the original PC pack with appropriate Acorn driver discs, one might think it would be an easy matter to draw up a comparison. Well, ladies and gentlemen, I strived to do just that, but I'm afraid my state-of-the-art PC system was having none of it; the merest whiff of the *Syndicate* CD caused sudden and irreversible paralysis.

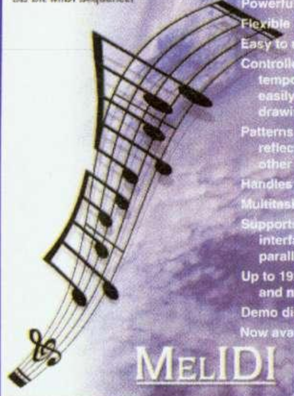
I'm sure the moral is plain to see. The only question that remains is to which game should R-Comp Interactive now devote their attentions? I'd suggest either Microprose's *Civilization II* or Bullfrog's *Dungeon Keeper* – either of these games would stretch RCI's talents as well as providing a great deal of enjoyment to Acorn games players everywhere.

Product details

Product:	Syndicate Plus (Bullfrog Productions)
Price:	£29 inc VAT
Supplier:	R-Comp Interactive
Address:	22 Robert Moffat, High Legh, Knutsford, Cheshire, WA16 6PS
Tel:	01925-755043
Fax:	01925-757377
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The Risc PCs over £1000 can also be traded in against with an older computer. Anything from a Spectrum or BBC Micro to a PC, Mac or other Acorn machine will qualify for a further £235.00 off of the above prices. Please ask for further details.

Monitors

(Either bought with computer or separately):
Acorn AKF60 (14") – £253.80
Acorn AKF92 (17") – £614.76
iiyama 350 (15") – £185.00
iiyama 17 (17") – £361.30
iiyama 17ES (17") – £420.00
iiyama 400 (17") – £361.30
iiyama Pro 400 (17") – £380.10
iiyama 450 (19") – £596.30
iiyama 501 (21") – £866.50
iiyama Pro 501 (21") – £866.50
iiyama 502 (21") – £908.85
iiyama Pro 502 (21") – £937.00
iiyama Pro-Lite 36 14.1" LCD – £890.00

PC cards:
5x86-133, 512K cache & PC Pro – £360.00
PC Pro (with PC Exchange) – £47.95
PC Sound Pro – £29.50

Psion Series 5

4Mb, with PC connection kit – £409.00
8Mb, with PC connection kit – £449.00
Parallel link – £34.95
PsiRisc link – £Call

Memory Upgrades

Please call to check current prices.
Other upgrades are available.
A3000 1-4 Mb – £64.60
A3010 1-4 Mb – £69.30
A3020/A4000 2-4 Mb – £52.80
A5000 2-4 Mb – £69.30
A300, 400, 5000 4-8 Mb – £128.00

Risc PC/A7000 SIMMs:
16Mb – £18.75
32Mb (not original RPCs) – £35.50
64Mb – £139.80
1Mb VRAM – £49.00
1-2Mb VRAM swap – £60.00
2Mb VRAM – £92.80

Music & Sound Section

Please call for other musical items

MIDI interfaces:
A30x0/A4000 internal 1x1x1 – £57.50
DMI 50 dual MIDI card (2x2) – £138.65
XG upgrade for DMI 50 – £129.25
16-bit sampler for DMI 50 – £70.50
MIDI Max II internal 1x1x1 – £92.50
Parallel Port 1x1x1 – £89.00
Synth 8 or Basic Synth – £44.60
Synth Plus – £55.75

Other hardware:
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Yamaha YST-M7 speakers – £43.00
YST-M20 DSP speakers – £65.00
YST-M100 speakers – £Call
YST-MS25 speakers & subw. – £79.00
YST-M100 – £Call
YST-MSW5 subwoofer – £59.00
YST-MSW10 subwoofer – £89.00
Sound Byte Recorder – £57.50

Other software:
MIDI Support – £18.50
Prosound – £116.95
Junior Sibelius – £49.00
Sibelius 6 – £99.95
Sibelius 7 Student – £349.95
Sibelius 7/VMP – £699.95
Please call for bundle & site licence prices
Optical Manuscript – £259.00
Sound module serial driver – £37.95
Studiosound – £116.95

Other Hardware

Hard drives & kits – £Call
Pocket Book A-Link – £59.50
Risc PC second slice – £116.30
RPC second slice (no PSU) – £90.00
StrongARM upgrade – £275.00

Other Software

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Impression Style – £88.00
Inferno – £9.50
iXRC – £14.99
Ovation Pro – £174.50
Personal Accounts 3 – £43.00
Photodesk Light – £125.00
Photodesk 2 – £247.95
Prophet 3 – £160.00
Wizard Apprentice – £22.50
The Tekkie CD – £45.00

Books & Manuals

BBC BASIC Manual – £21.95
RISC OS 3 PRM – £104.00
RISC OS 3 PRM V5a – £32.75

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1MHz BUS, USER PORT and ANALOGUE TO DIGITAL CONVERTER

A single width card that is hardware and software compatible with the original Acorn double width card. It provides the I/O interfaces of the original BBC Microcomputer. A new I/O_Podule module has additional SWI's to simplify the use of interrupts from the User Port and is also available separately as an upgrade.

HIGH SPEED INTERNET ACCESS

Uses the Dual High Speed Serial Card. Baud rates up to 230,400 including 57,600 and 115,200. Dramatically improves the communications speed of pre-Risc PC computers. Compatible with all popular Internet software including the ANT Internet Suite II. Modem, cable, card and software bundles available.

12 Bit ANALOGUE TO DIGITAL CONVERTER

A card that provides 8 channels, input voltage range -5V to +5V, up to 333,000 samples per second and separate 8 bit digital input and output ports. New software makes taking samples extremely simple.

DESKTOP FORTRAN 77

For the seriously scientific user the Desktop Fortran 77 package enables programs to be edited, compiled, linked and run in the Risc OS Desktop environment.

Other products include SCSI Interfaces, IDE and SCSI Hard Discs, CD-ROM's and Tape Drives, IEEE488 Interface Cards, 16 Bit Parallel I/O Interface Cards, ARINC429 Interface Cards, STEbus Interface Cards. We also supply complete computer systems, etc

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Tel: 01703 261514 Fax: 01703 267904
e-mail: sales@intint.demon.co.uk URL: http://www.intint.demon.co.uk

INTELLIGENT INTERFACES



At your service

Simon Kiff's final look at programs to enhance your desktop

These programs were written by the late Graham Crow – it just goes to show what an excellent programmer he was and how his talents will be missed.

MenuBar 2

MenuBar is a file and application launcher that sits unobtrusively at the top of the screen. The main bar hides a number of drop-down menus which contain programs and files – each with a small version of their icon. To add more programs simply drag them from a filer window onto the bar.

You can have as many bars as you want and can switch between by pressing Adjust over the control button to the left of the bar. This button lets you carry out many shortcuts, such as opening all the menus, as well as managing the bars themselves.

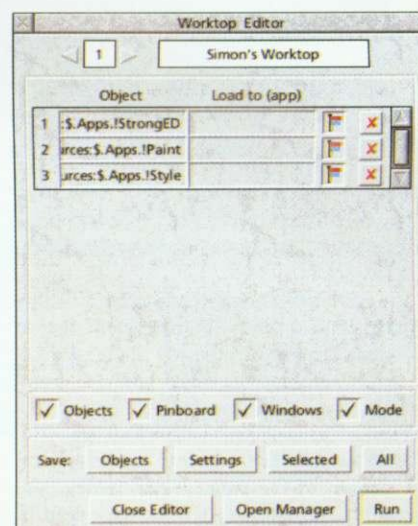
I have seen many such applications around (and have even written one myself), but this seems to be one of the best. The drawback is that it does cost £15 pounds, however, a demo version is available for download.

Worktop

Worktop is a commercial program that lets you control your desktop by creating up to 30 worktops. Each of these is effectively a desktop with its own backdrop, pinboard attachments and mode. You can also specify a number of objects, which can be directories, files or applications. These are normally run, but there is also the option of loading files into any application. Control is via the worktop editor window.

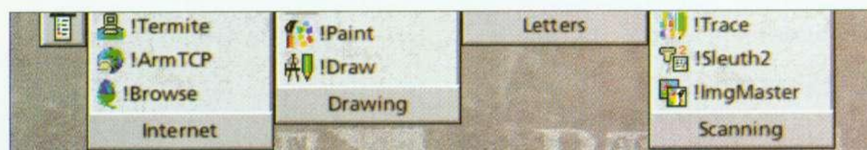
Simply set up the pinboard and mode as you would like, open any windows where you need them and add any objects by dragging them to the window. Clicking Save All adds the worktop to the list, which can be accessed with a single click from the iconbar.

I found this program to be extremely useful, since you can set up different working environments. If you frequently write letters you could create a "Letters" worktop, which would load *Impression*, load a template document in, open your directory of previous letters and open your address book.



Editing a Worktop

When you have finished your letter, you can simply click on "Internet" and *Worktop* will close all unwanted programs and load up your Internet suite, running the news reader automatically and changing to a mode with more colours or a higher resolution. A demo version of *Worktop* is available from Graham's website, but the full version costs £15.



A selection of menus in MenuBar

Tiger

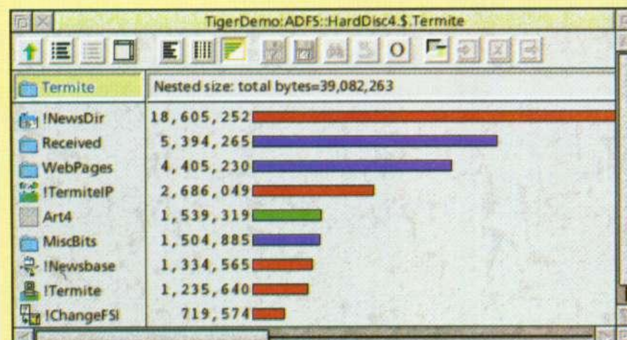
Tiger is another program in Graham's desktop suite. It serves as a complement to the Filer, removing the problem of 10 character filenames on the desktop. Instead of actually providing longer filenames (as some previous patches have attempted to do), it provides an alternative way to view the contents of directories.

Within this display you can enter a long description (up to 140 characters), which will be remembered as you navigate the hard disc.

At any time you can open the actual directory in which you will find a new TigerData file containing all the descriptions you have entered. As well as displaying a description, you get a graphic display (using coloured bars) of the relative sizes of the files in the directory. *Tiger* has several other features – you can search descriptions using two statements and Boolean logic. You can also drag descriptions straight out of the window and into your text editor or word-processor.

This program, while probably useful for many people, is not my cup of tea. I'd rather see directly into my directories and don't like the idea of an extra file appearing in every directory. Plus, I am probably too lazy to go around giving my files a description.

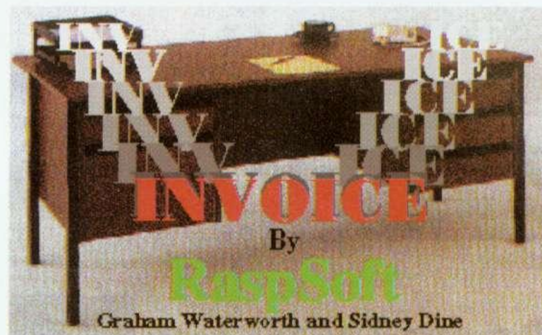
That said, this could be ideal for people with a lot of clip art or letters which they need to organise. The new Risc PC, Phoebe 2100, has long filenames built into the operating system, but for users of older machines this program could be the key. As with Graham's other software, a demo can be downloaded and the full software costs £15.



File and application sizes in Tiger

For demos of the above go to http://www.argonet.co.uk/users/gmcrow

Make it pay



Mike Tomkinson looks at a new program to help keep the cash flowing

The sound basis for any business, no matter what its size, is good bookkeeping. Payment for services or goods provided is usually requested in invoice form – the official way of informing the customer of the amount owed and when payment is expected by.

Invoice from RaspSoft is designed to help you and your business achieve just this – it is *not* an accounts package. It comes on a single floppy with a printed manual. Installation is straightforward and mostly automated once you have entered your company details – which registers the software to the company.

Setting up the accounts

Customer-details may then be entered relating to various accounts that can be set up. The current version of *Invoice* allows a maximum of 256 customer *accounts* – note that is accounts not customers. The Subtotal account names feature is particularly useful if, for example, you wished to keep separate accounts – Car Sales, Car Spares and Car Servicing for instance.

The customer list can be added to or edited at any time. At this point the customers and accounts are set up and ready to use and the program only requires final configuration. This involves the entry of telephone and fax numbers as well as e-mail and website addresses. The latter points are greatly in the favour of the package as I believe no good business should be without e-mail if not a website.

The current rate of VAT and your VAT registration number can also be entered if applicable. There seemed to be no method of entering your Company Registration number – a lawful requirement on invoices issued by Limited Companies according to section 349 of the Companies Act of 1985. I have suggested to the authors that this be remedied in future editions.

Invoices can be auto-numbered or set to a number within a range specified when the data file is set up – I'd recommend over-estimating the number of likely transactions.

Month locking is a method of safeguarding against an invoice being issued with the wrong month's details. You would use this feature at a month end to lock a previous or future month(s) so that only invoices issued in the current month are valid – a very useful feature.

Entering a new invoice

A menu list to the right of the address box gives you access to all the customer details. You can then enter quantity of goods sold, a description and the unit, and *Invoice* will automatically calculate the price including VAT, if applicable.

One minor but important point here is that I could see no easy way of having a mixed invoice of VAT and non-VAT goods on the same invoice – for example, when including books which are zero rated and computers that aren't.

A confusing aspect is the 'Cash box' which appears on the invoice – any character entered in this box indicates a paid invoice. Although you can use a code to indicate how the invoice was paid – V=Visa, C=Cheque, for example – I would also like another box to show the preferred method of payment.

Other options

There are a wide range of options, such as the ability to search, list, mark as paid, mark as cancelled and move invoices between different sub-accounts. I am not sure what an accountant would say about the latter but is seems to make sense that an invoice can be moved to a different accounting head.

A package of this type stands or falls on its ability to produce a paper invoice and this is where *Invoice* comes into its own. Not only can you produce an invoice, but also its close cousin the delivery note – both are produced at the same time, exactly as they should be. It also allows you to produce a wide variety of reports for keeping a very careful track on various accounts, customers, invoices paid or unpaid etc. This is fairly comprehensive for a package which makes no claim to be a full-blown accounts package.

Unfortunately I did not like the final printout of the invoice that much – it contained all the required information (apart from the Company Registration Number mentioned earlier) but it wasn't possible to preview it on screen. The actual output was A4 in a landscape orientation, with almost half the invoice being given to a box for a logo and the name and address of the company sending the invoice.

After a quick look at the actual program I saw that other Drawfile templates were available which could quickly be adjusted to suit any user. The variables can also be adjusted, by removing the background, so that the invoice could be put onto pre-printed company invoices if required. Naturally you can add your own logo and adjust the fonts in *!Draw* – all are highly flexible and designed to help the user.

This version of *Invoice* is best described as being the entry level – a decision has not yet been made as to whether a more fully professional version will be written. The same authors took exactly the same line with their now fully mature *HardCash* program.

I would certainly hope that a fully featured version is forthcoming as business programs on the Acorn platform are not in great supply. For home and small business this version is perfectly acceptable, if you can live with the minor restrictions I have mentioned elsewhere. A downloadable trial version is available on the RaspSoft website. AU

Monthly totals – Account 1

	Net	VAT	Total	Paid	Balance
January	0.00	0.00	0.00	0.00	0.00
February	0.00	0.00	0.00	0.00	0.00
March	0.00	0.00	0.00	0.00	0.00
April	0.00	0.00	0.00	0.00	0.00
May	0.00	0.00	0.00	0.00	0.00
June	0.00	0.00	0.00	0.00	0.00
July	1291.90	226.09	1517.99	0.00	1517.99
August	0.00	0.00	0.00	0.00	0.00
September	0.00	0.00	0.00	0.00	0.00
October	0.00	0.00	0.00	0.00	0.00
November	0.00	0.00	0.00	0.00	0.00
December	0.00	0.00	0.00	0.00	0.00
Totals	1291.90	226.09	1517.99	0.00	1517.99

Product Information

Product :	Invoice
Price :	£30 (no VAT)
Company :	RaspSoft Business Software
Address :	15 Market Street, Wibsey, Bradford, BD6 1LR
Telephone :	01274-671922
e-mail :	raspsoft@argonet.co.uk
WWW :	http://www.argonet.co.uk/business/s.dine/

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the ultimate egyptian adventure game
featuring high quality graphics, cd-audio tracks
and a quest you will never forget...



http://members.aol.com/artexsoft

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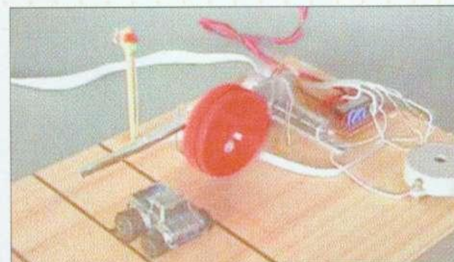
News



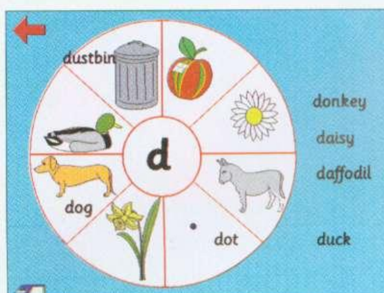
Helping hands

Rob Ward has designed some Web pages for teachers and 14 to 15-year olds to get a simple and cost-effective introduction to computer interfacing. "I wanted to develop something that students could also find accessible at home at low cost. For many students a Lego set is just out of the question and at times just not versatile enough."

These pages are for anyone interested in robotics and are intended to break the cost barrier to experimentation. Projects are graded as simple (traffic lights), medium (LEDs), hard (a lift) and very hard (a buggy) with step-by-step instructions and illustrations. All the graphics were done on a variety of Acorn machines with the photos from a Sony Mavica and the HTML produced with *Zap* and *NotePad*. See for yourself on http://www.mtclearsc.vic.edu.au/Robotics/Robots.htm



Make your own car park boom gate



Meet the D words

As, Bs and Cs

More Literacy Hour help this month from Logotron (01223-425558) with *Words and Pictures Alphabet*. Aimed at Key Stage 1 teachers, this complements the popular BBC TV schools programme and supports the current literacy initiatives.

The CD-ROM explores and teaches the alphabet with a selection of story games and activities for each letter. As well as focusing on the different sounds and word blends children match words and pictures to animals, environments, people, jobs and time.

Activities are fun and varied and develop phonic and letter knowledge through a gradual introduction of new sounds. Each story and game is interactive with help always available from the *Magic Pencil*. The cost is £24, which includes a set of photocopiable worksheets.

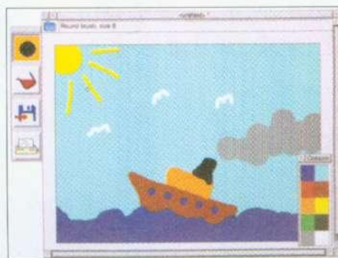
Search for the best

Acorn and Argo Interactive are searching for a school. Not just any school, but one with a website that makes the most of what technology and the Web has to offer. There is £1,000 worth of software and hardware up for grabs and if you think your school could win ***Best School's Web*** then you need to get your entry form in as soon as possible. Teachers or pupils can nominate a site by e-mailing schoolscomp@argonet.co.uk before 25 September. Prizes will be awarded at Acorn World '98.

Websites will be judged on how effectively information is presented, on imaginative use of technology and high site interaction. When it comes to content the judges are looking for useful information about the school, discussion groups and plenty of good educational applications.

Judges will also be on the look-out for sites encouraging a sense of community among pupils, parents and teachers. Acorn's Chris Cox remarked: "Websites are fast becoming an essential means of communication for schools. Acorn is keen to reward those school communities who are prepared to invest in a resource which is set to be an essential part of the curriculum as we move towards the new millennium."

Artful kids



SEMERC (0161-627 4469) have produced an enhanced version of *Dazzle* called, *Dazzle Plus*. Costing £75 the new version of this art package for 5-14s comes with new tools such as a realistic spray gun, a clone brush for photo-retouching, a selection of stamps which can be used to draw and fill objects with, or to add to any creation. You also have the option of applying colours and stamps at various degrees of transparency.

A configurable toolbar has been added to this version. So, for instance, the colour menu can be set to only allow access to the primary colours for young children and then gradually add more colours – up to 16 million – as they get older and more experienced.



Simple or sophisticated – Dazzle Plus promises to grow with you

Our country

The PictureBase range from AVP (01291-625439) has a new addition – *The Making of the United Kingdom*. This gives resources for Key Stage 3 History and in particular Study Unit 2 as it covers the major political, social and religious changes that shaped Britain between 1500 and 1750.

This means that topics such as the changing power of monarchy, the relationship between Crown and parliament, civil war and the Restoration are covered among others. It also looks at everyday life such as the differences in lifestyle between the town and countryside, the changing role of women and expansion overseas.

Students can search through contemporary pictures, engravings, portraits, plans of battles and sieges all accompanied by text, sound and video files. Themes can be traced by key word searches. It's available on CD-ROM with a five-user school licence and the price is £69.

Contacting me

You can contact the Education page by writing to me, Pam Turnbull at *Acorn User*, IDG Media, Media House, Adlington Park, Macclesfield SK10 4NP
or e-mail: aueduc@idg.co.uk

A bird's eye view







Pam Turnbull looks at Britain from a different angle

British Coastlines from the Air is a companion disc to the earlier *British Isles from the Air* though it also works in its own right. There is little in the way of bells and whistles, just beautifully clear images with written details which can be saved and exported into other applications.

Designed for classroom use, the CD-ROM is accompanied by a book of teacher's notes and activity sheets (also available on the disc). As we've come to expect from Anglia, these are practical and highly usable. If you have a copy of Key Plus you can also access the datafile of images and text.

You start in the cockpit of a small plane. From here you can see a dock, a chalky headland and an outline of the British Isles. This is your route to exploring the three available categories: Human landscapes, physical features or specific locations.

Zooming in

Click on the map and you're presented with an outline of the British Isles. Scattered around are black blobs which denote images and information available on the CD-ROM. You can zoom in and out as some locations are very close together. It's here that I would have liked to have seen a more balanced dispersion of images allowing you to trace the change in coastline features and usage around the country.

When you've made your selection you're taken to a page on that specific location with image and description. This record card gives you an image, the first part of the caption/description, name of location and its county, national grid reference, latitude and longitude, as well as relevant features such as changes in sea level and historical settlement.

In addition, the icons at the bottom left allow you to see just the text, an enlarged image or note which of the 143 slides this is. Details can then be recorded in the built-in notepad and used for creating presentations or saved separately when you leave the program.

If you go down the physical or man-made features routes, you must decide on the type of feature you wish to see. For instance, when it comes to physical features you can opt for: Beach, cliffs, erosional landforms, transportation, landslides, vegetation, changes in sea level, ingenuous rocks, waves, contrasting rock types, rock structures, wave-cut platforms, dunes, salt marshes, weather and climate, effects of erosion and sea defences. If you opt for information on *landslides* there are 10 photos to access. Click on which in the list seems of most interest and you're taken to its record card. Human interaction/interference is presented as: Communications, environmental impact, fishing, historical, industry, ports, redevelopment, settlement and tourism and leisure.

Simple presentations

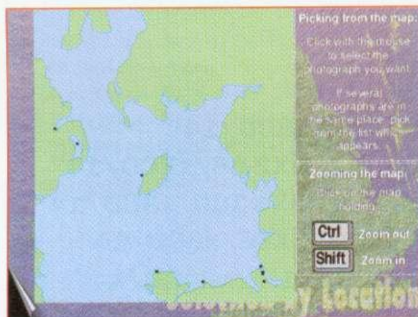
Back in the cockpit you can prepare presentations of up to 20 images very simply indeed. Just click on the camera and you're shown a page of images by number and a display tree of 1-20 slides.

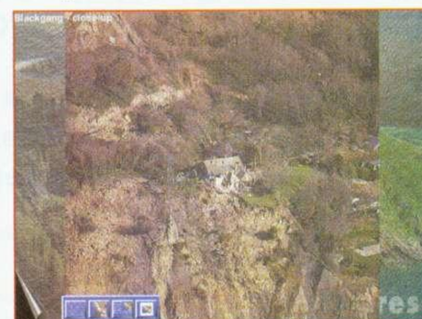
You can access your notes here to see which you want or use the list of images in the manual. Just drag the photos you want into the tree and decide on the setting – whether you want the titles on or off, if you want to move on automatically or leave it up to the presenter or viewer as well as the length of time each slide is displayed for.

Once it's running, move your mouse and a set of controls appear allowing you to pause, move back or forwards or leave the presentation altogether. Again, this could be improved if you could add your own images from other sources such as *British Isles from the Air* or the Internet, augment the text and even add a voiceover. This would make it a useful CD for other curriculum areas as well as geography.

Internal and external exams use aerial photography widely these days, and a neat addition to this program is that all the images are cleared of copyright and can be extracted and used in projects, exams, worksheets and so on. All in all a simple and quick to use tool for the classroom.







Product details

Product:	British Coastlines from the Air
Ages:	11-16
Price:	£40
Supplier:	Anglia Multimedia
Tel:	01268-755811
WWW:	www.angliainteractive.com

I'll have a B please

A content-free tool for improving literacy. **Pam Turnbull** reports

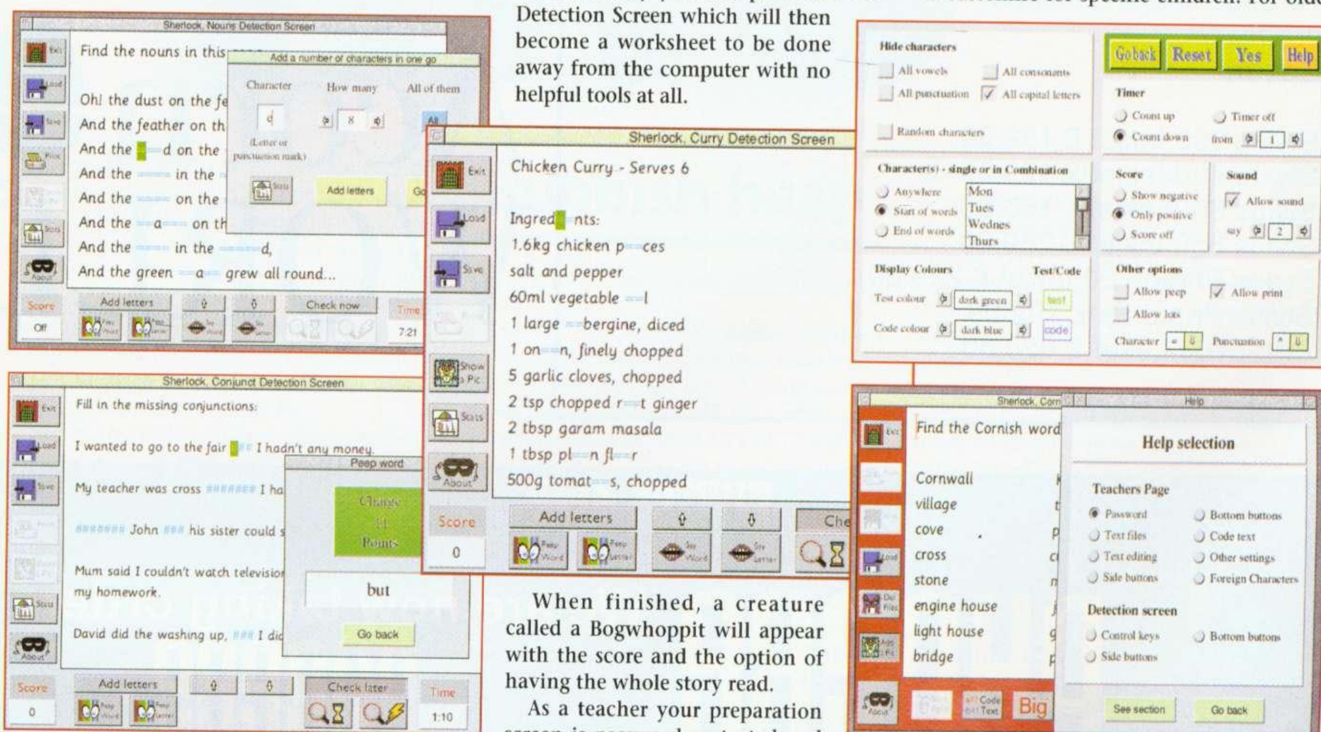
If you need something to help with punctuation skills and spelling while practising phonic rules and foreign characters then this is for you. *Sherlock* replaces Topologika's earlier *Punctuate!* and was inspired by Bob Moy's *Developing Tray*. It lets teachers load any text and then edit out letters, letter combinations, or punctuation. Children of all ages have then got an easy toolbox and display to allow them to reconstruct the piece.

The loading procedure is a little fiddly and if you want speech you must load these files before the main program. It will work from floppy as well as hard disc which is a bonus for anyone with older machines – as long as these run RISC OS 3.

Once running you're presented with the *Detection Screen* in multi-tasking or full-screen format. The program comes with over 40 texts and there are additional Activity Packs on the way too, but the first thing you must do is load one. The choice covers: reading, writing, grammar, spelling, vocabulary and modern languages, but also maths and even home economics. Then children must decide which letters (lower and uppercase) or punctuation has been replaced by @s or $s.

Various tools are available to help depending on how the teacher has set up this particular piece. There may be a picture, the *Stats* button will tell pupils how many of each letter and so on is missing, or they can *buy* some help with the points scored.

The *Say* buttons speak the word or letter though at times this synthesised speech can be a difficult to make out. Alternatively, they can *peep* at the word or letter or if really stuck can buy some or all of the letters. Work can be checked as children type or they can opt for checking later – which gives higher scores – by the *Fast Test* when characters are checked all at once, or the *Slow Test* which shows the right and wrong replies one by one. Alternatively you can print out the Detection Screen which will then become a worksheet to be done away from the computer with no helpful tools at all.



When finished, a creature called a Bogwhoppit will appear with the score and the option of having the whole story read.

As a teacher your preparation screen is password-protected and presents you with a screen with a host of options as well as a place for you to type in or import the text you want to work on. Depending on who you are preparing the text for you can have *Big, Medium or Small* text and change the colour of text and code colours, which is a useful option if a student is colour blind. You don't have a full word-processor at your disposal so the key is to keep stories short.

Once text is input you need to decide which parts should be removed. There are check boxes for hiding one or all of these categories: all vowels, all consonants, all punctuation or all capitals.

Hidden letters are replaced by a character of your choice such as =. Alternatively, you can opt for a random selection such as replacing one character in three. You can also choose specific characters or combinations up to 12 – ing, er, ed, fore, even punctuation marks – wherever they occur or at the start or at the end of words. This means that you can set up a story where a good number but not all of *there* and *their*, or *your*, *you're* are removed.

There are other decisions which need making too. If you want to have a picture clue you'll need a sprite file saved in the picture dictionary and within your !SherFiles folder. If you decide to have a scoring system, there is the option of having only positive responses or having negative ones too. Sessions can be timed with teachers setting the number of seconds and whether these are counted up or down.

A well thought out package which can be used in many different subjects, and is easy to customise for specific children. For older children I would like to have longer text – there is a maximum of 100 lines – and be able to be a little more flexible in the text options. The speech does need some work too, but this is an excellent package and one which I, for one, will be using a lot.

Product details

Product:	Sherlock
Ages:	5+
Price:	£35 (50 per cent off if you upgrade from Punctuate)
Supplier:	Topologika
Tel:	01326-377771
Web:	www.topolgka.demon.co.uk

Dave Acton and **Dave Lawrence** present some more class A stimulants

star info

Many might argue that we produce enough nonsense every month without requesting more of the stuff, but judging by the excellent response we had to our nonsense challenge, these people are clearly misguided. Correct, maybe – but definitely misguided. As this is a competition of sorts, I suppose you'll be expecting runners-up, a small podium and a dousing with Moët. Well, we'll see what we can do...

By far the most common entry produced sentences by picking random words from various lists of verbs, nouns, adjectives and so on. These programs worked with varying degrees of success, largely dependent on the range of words in the 'source' lists. What let most of these programs down was the rigid sentence structure – number, adjective, noun, verb and so on. One sentence would be very much like the next, which was a shame.

We then had the usual array of completely off-the-wall entries – even in a nonsense competition there are the completely bizarre. In this category, honourable mentions must go to: **Maurice Hendrix** from the Netherlands for his *Mr. Blobby* simulator. Blobbyblobby blobby blobby. Quite. Noel's House Party must mean something different in Holland.

Mark Adcock for *NameGame*, which takes your first name and makes a rhyme out of it according to that timeless '60s classic *The Name Game* (by Shirley Ellis – thank you Yahoo!). Mark has even supplied a sample from the original song. **Richard Possnett** for *FatherJack*. I'm afraid there's no prize for guessing what this does. Finally in this category is *WorldCup* from **Ben Spencer** – slightly belated maybe, but bound to be able to create a hit for 2002. On to the finalists

Rubbish heap

and we have four joint third places to award.

The first two could be roughly described as language translators: **Tristan Harris** has taken an idea that has been floating around on various websites and BBs for a while now and produced *Euro*. Based on a set of spelling rules, it converts a text file from English into 'EuroEnglish'. A full explanation of these rules can be found on the cover disc.

Our second translator comes from **Nick Craig-Wood** and is called *Amy*. This simplifies the input file into a form that Nick's two year old daughter Amy could understand. Holly is the family dog, Ednum [Edmund] is her baby brother and, as you'll see, Amy likes the Tellytubbies!

Our third third place goes to **Thomas Simmons** for his completely surreal *Do you live with Oranges*? This is our only interactive prize-winner and, as Thomas puts it, is the result of an artificial intelligence program that went horribly wrong. The program is similar to the classic *Eliza*, in which you hold a conversation with the computer. A good *Eliza* would be able to pass the Turing Test and you'd not know you were talking to a machine. On the other hand *Oranges* is like talking to someone in the green field at Glastonbury.

Philip Mellor wins our last third place with his *Impression Spell*-based entry *Gogogoch*. This picks words at random from the dictionary and tries to glue them together. The words have to overlap by one or two letters for them to be joined. The result? One HUGE word, which could be translated into a Welsh place name (if you used one of Tristan Harris' other entries!) or, if it was German, into one very short English word.

As you can see, it's quite crowded on the third step of our podium, so I bet **Matthew Mayer** is quite glad he's the only occupant of the second step. He gets there thanks to *Charabia* (French for 'gobbledegook'). This remarkably small program (it would be under 1K if you took the comments out) generates incredibly convincing French looking sentences. Convincing that is, unless you've got even a CSE in French – it had us fooled though. It uses a very simple selection of word parts – beginnings and endings, a conjunction or two and the occasional *Le* or *La:*

L'anglé du nouvaient et m'aveux blasant bandé is at least as believable as 'Vorspung Durch Technik'!

We were surprised we had no entries like this in 'English', but then maybe the foreignness of *Charabia* is what makes it work so well.

And the winner is...

Mark Adcock for *Gibber*. This was the only entry in the 'adjective, noun, verb' category which produced sentences with different structures. More than that though, it contains a number of rules which means that the rubbish it produces is intelligible rubbish. (Well, you know what we mean). For example, nouns have gender and flags to indicate when they can be used with certain conjunctions. Verbs 'know' the sorts of sentences they can work with. Full details of the internal workings can be found on the cover disc.

Congratulations to Mark and the other winners and many thanks to all those who entered. Details of our next challenge can be found at the end of *info.

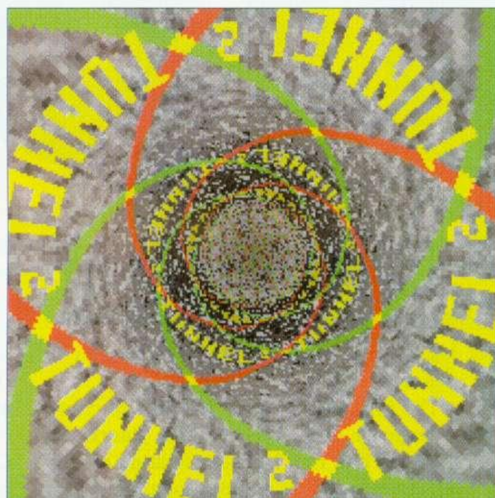
Piping hot

Author: Richard Wareham

Old challenges never die – they just bubble around and occasionally surface. *Tunnel* is **Richard Wareham**'s contributions to our... cloud?, winter? – hang on – tunnel challenge. Double-click the app and try out the various options. You can have depth-cueing and flame-mapping or texture-mapping.

You can also opt for a large or small tunnel. The smaller tunnel is obviously quicker to draw. Once the tunnel has been displayed you can accelerate forwards with Select or backwards with Adjust. Moving the mouse left and right causes you to roll side to side. Menu toggles 'sick mode' which Richard warns is not a good idea just after your pie and chips.





Fast texture mapping

In *Doom*, a technique called ray-casting is used to numerically estimate the intersection of the observer's sight vector with the floor plane. We will attempt to find this point analytically (mainly so that when we pre-calculate this in BASIC it doesn't take a blue age).

Figure I shows a view of the observer from the side. The observer's eye is located at O a distance OA from the floor plane. The observer's sight vector is OC passing through the screen in front of the observer, DB. The object is to find the point at which the observer's sight vector intersects the floor plane, B.

The texture space is mapped onto the floor plane centred on the observer's position. The v-axis is parallel to a line extending perpendicularly from the observer's forehead. It is clear that the v-co-ordinate of B will be equal to AC.

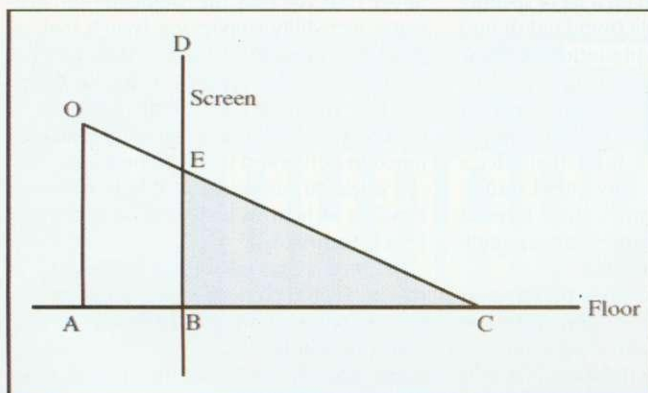


Figure I

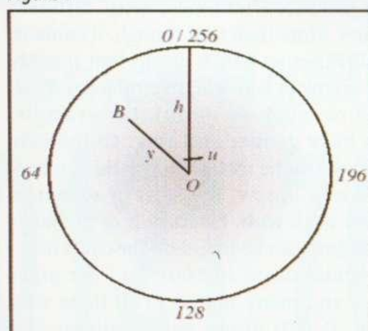


Figure II

In the following discussion the following distances will be used:

```
|OA| = h
|AB| = d
|AC| = v
|EB| = y
```

where y is the y-co-ordinate of the point on the screen, h is the height of the observer, d is the distance of the observer from the screen and v is the v-co-ordinate of B in texture space. Considering similar triangles OAC and EBC, one can see that:

```
(d+v)/h = v/y => v = (d*y)/(h-y)
(1)
```

One can use a similar technique to find the u-co-ordinate of B but this is not required for this discussion.

Floors to tunnels

Look at Figure II. This presents a view down the tunnel with the points marked as before. We want to find the (u,v) co-ordinate of the point B. The secret is to abandon Cartesian co-ordinates and resort to Polar co-ordinates. We can now express the position of B as [y,u], where y is the distance from the origin and u is the angle from 12 o'clock.

Assuming that our texture is 256x256 (the magic number) we can find out the u-co-ordinate of B by just taking the angle (which we scale to have the range [0..255]) from the vertical. If we take a slice along the tunnel in the direction of OB we find that it looks remarkably like Figure I (shock!). We can therefore use the same mapping formula that we derived above. We now have the texture space co-ordinates of B as:

```
v = (d*y)/(h-y)
```

and u being taken from the co-ordinates of B (see diagram).

Below is some pseudo code showing the algorithm above:

```
d = Distance of screen from observer.
h = SCR_Y>>1
FOR a=-SCR_X>>1 TO a<SCR_X<<1
  FOR b=-scr_y>>1 TO b<SCR_Y<<1
    y = sqrt((a*a) + (b*b))
    u = (atan(a/b)*256)/(2*PI)
    v = (d*y)/(h-y)
    u = u AND 0xFF; v = v AND 0xFF;
    plotpoint(a, b, TEX[u+(v<<8)] );
  NEXT
NEXT
```

A suggestion is that you pre-calculate u and v for every point (a,b) on screen and store them in a big lookup table.

Depth cueing

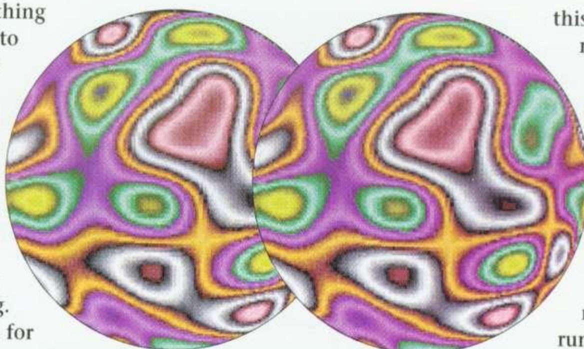
Simple, even when using the fixed 256-colour palette – all you need to do is AND the colour with a shade of white and you find the nearest colour with that shade. By ANDing the whole tunnel image with a series of concentric circles getting darker towards the middle, the resulting depth cued image is produced.

Sphere and loathing

Author: Thomas Madams

Apparently sphere wrapping is something **Thomas Madams** has been meaning to get round to for a while now. A bit like Chr*stm*s wrapping then. (Sorry. It is only July as I write this, but I did just see a C-word advert on Sky news this morning!)

'It's really quite simple in principle. You take a predefined table of data that contains the co-ordinates for each pixel of the sprite and their position on the screen after wrapping. The tricky bit is calculating the values for this table. The method I used to do this is not strictly correct and really just involved tinkering about until a pleasing result was reached.



'Upon running the program, you will be asked for a grid size, (5 or 6 works best) and then a plasma field will be drawn, this is the image that will be wrapped. Move the mouse left or right to change the palette, click Adjust to draw a new plasma field and click Select to run the sphere wrapping routine.

Postcode

Author: Justin Fletcher

The coder is our old friend **Justin Fletcher** who has come up with a simple but effective Unix-style mailbox checker. If you just want a means of seeing whether you have got any important messages, *CheckMail* is for you. Run from the command line, it lists how many messages you have from whom and, this is the best bit, reads this information aloud should you have Jonathan Duddington's *Speak* module installed.

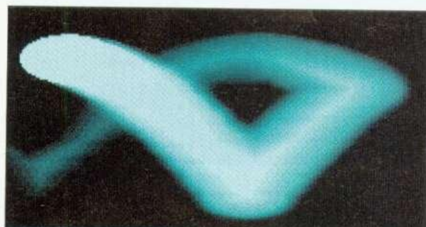
CheckMail accepts Berkely format mailboxes (such as those produced by *Marcel*, *sendmail*, *gmail* in FCC mode and *FreeSMTP*.) Such mailboxes contain messages separated by 'From' headers. *CheckMail* copes with all the major variants of headers and produces an intelligent and concise summary of the mail on your electronic mat.

Run *CheckMail* from the command line and follow it with the filename of the mailbox. You can specify an optional e-mail address after this, which can be used to separate mail properly sent to you from the junk.

Incidentally, a demo version of the excellent *!Speak* is available from **www.argonet.co.uk/users/jsd**

Adcock's 'alf pag

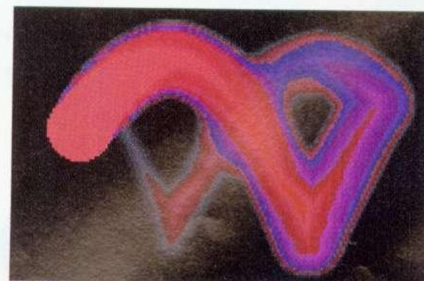
Author: Mark Adcock

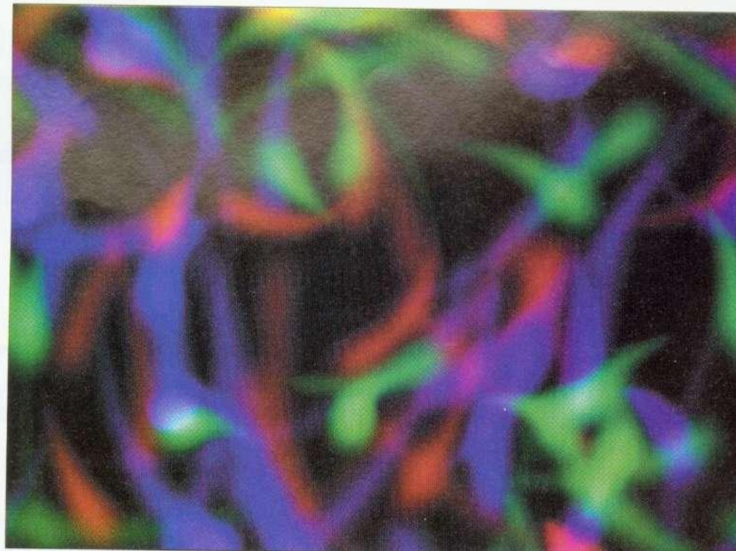


Regular doodler **Mark Adcock**, fresh from his triumphant nonsense-generating, provides us now with three graphical offerings to distract us from the drudgery of everyday life. First up is *PlasBall12*.

As you might expect, this features a ball of plasma and mode 12. A random palette is chosen (well, a random colour is chosen, and a 16-colour scale from black to that colour is defined) and then a ball bounces merrily from side to side, unhindered by energy-loss from its many impacts and leaving in its wake a pleasing trail which fades away, much as everything used to on those lovely old green monitors. Reading/writing four bits at a time is fiddly, so Mark just reads the bottom four of each byte and duplicates them in the top, so the mode is effectively 9 rather than 12.

Now imagine that the ball is hot – a freshly steamed dumpling perhaps, although slightly more bouncy. Imagine it is bouncing around in a cold place (chest freezer, Helsinki, wherever). If viewed by a heat-sensitive camera, the effect would not be unlike that produced by *PlasBall13*. Since this uses mode 13, fading the screen is rather easier with one byte per pixel. Although the fading code takes into account the neighbours of each pixel, it doesn't allow for the eccentric nature of the default mode 13 palette, which provides it with its thermal-imaging charm.





Finally, *RGBsnakes* ups the pixel-bittage once more by plotting some shapes on a 16-million colour screen using a piece of code which increases the red, green or blue value of a circular region of the screen.

When you get bored with this, the author suggests pressing Escape (nothing new there). In this case, random circles will then be plotted, which build up (after quite a while) into a "good pattern" which Mark suggests using as a backdrop. Escape again to exit.

I am a mole, and I live in a window

Author: Philip Mellor

The latest in interactive, animal-unfriendly desktop violence now. **Philip Mellor's** come up with a version of the classic subterranean mammal-bashing arcade game. Called simply *Whack-A-Mole*, the clue, as always, is in the title.

You have 15 seconds to whack as many moles as possible by clicking on them.



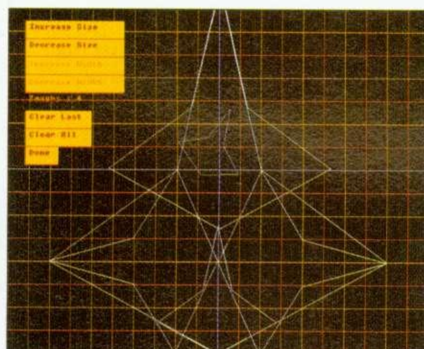
You score five points for each mole whacked but lose three if you miss. You also lose two points if one of the little blighters escapes unbashed. I've tried using a heavier pointer design to improve my performance, but to no avail. We also feel that the game might benefit from one or two squelchy sound-effects if anyone would care to oblige...

Yours fractally

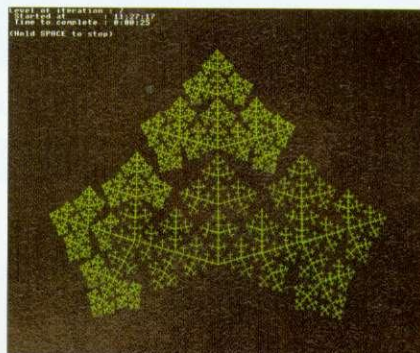
Author: Dean Alexandrou

As promised, here's the enhanced version of **Dean Alexandrou's** 2D fractal plotter and editor – *FracWorks*. The program isn't multi-tasking, but is menu driven and quite easy-to-use.

To get you started, simply double-click on *FracWorks*, click on *Load Fractal Set* and pick one of the ready-made designs. Then click on *Plot Fractal*. As with many programs of this nature, the best way to become adept is by fiddling with it.



FracWorks caters for most simple 2D fractals, although there are some more advanced ones (such as the Koch Islands – I thought they were in the Mediterranean somewhere?) involving 'linkers' and 'reflection' which are beyond its grasp. There are two main stages to producing a fractal image. The first involves editing the 'initial image'. Load the example called *Simple* and then click on *Edit*



Initial Image. As you will see, the image of this example is just a square. The mouse is used to design the basic shape of the fractal:

Select	draw to point
Shift + Select	fill to point
Menu	move to point
Adjust	delete last line

You can also use the cursor keys to move the menu around so it doesn't get in the way, and Space centres the mouse. The first segment of the image should **always** be a move. Now, you need to specify how the initial is to be altered in between levels of recursion. For this you need to select *Edit Blueprint*.

You are presented with a smaller version of the initial image you defined. Position this as required, change the size using the menu and rotate using Menu and Adjust, before fixing with Select. Again, the menu can be moved with the cursor keys.

The main menu also provides some control over how the fractals are displayed – *Set Plot Options* allows you to choose the basic



plot type, number of iterations and whether the recursion should build up one level at a time from zero or not. You can also load a different palette – put your own ones in *!FracWorks.Palettes*.

Typesetting

Author: Owain Cole

Owain Cole has pointed out a shortcoming of RISC OS's DOS filetype mapping facilities – they only work if the files are of type DOS. Fortunately, Owain also provides a solution in the shape of *PCSetType*. The filetype-setting option on the menu cannot be used recursively.

So if you have a whole directory structure you want to change to DOS, it would normally take some time. With *PCSetType* simply drag a PC partition file, directory or archive onto the *PCSetType* icon and the applet will set all the files to type DOS. *DOSMapper* will intercept this call if the file has a recognisable extension and retype it intelligently.

Side Click

Author: Owain Cole

And while we're on the subject of PCs, **Owain Cole** has provide another utility with them in mind. *SideClick* adds a Windows feature to your Acorn desktop.

Picture the scene – you're editing a long file and you want to scroll up a fair bit. You click about the sausage to move up a windowful and hold down Select in the pathetic hope that it might have learned to auto-repeat since the last time you tried it. Well, after running *SideClick*, it will. The patch is performed by a module, which provides a single * command – *SideClickTime <time>.

There are a couple of minor provisos – you have to keep your pointer still for the auto-repeat to work, and if you set the time value too low you can slip off the sausage when dragging it (oo-er missus). If you like the effect, add it to you boot sequence. By default, the time is 30 – see the *!Run* file.

Star info

Don't panic

Author: Stu Smith

When Zaphod Beeblebrox was fed into the Total Perspective Vortex, perhaps this is what he saw. As we all know though, the TPV that ZB was shown was one in a galaxy specially built for him, so all it showed was how great he was...

URHere was written by **Stu Smith** and draws a perspective view of a spiral galaxy. The small green arrow roughly indicates your current position (to within a few tens of billions of miles). Low- and High- resolution views are available – run the 13 or 20 version as appropriate.



LOGO CHALLENGE

Well, the challenges continue. You did us proud with your nonsense, and now it's time to channel your programming talents into something more graphical. In short, we want you to come up with an animated logo for *info.

Not an all-singing, all-dancing, 20 minute animation of Disney-like proportions you understand. No, we want your animation to last no longer that **two seconds**. That's one-mississippi, two-mississippi, done. Rather like those little numbers they show just after Part One has finished and before the first advert comes on. You can feature "star" and the "info" in whatever way you please. The only other restriction is that your entry must, in total, not exceed 32K (another random number, lovingly plucked from the ether by highly trained number-pickers).

Your logo can be written in anything you like (Logo even), although it should be runnable by a standard machine. Risc PC-only, and even StrongARM-only entries will be considered, although a good logo that works on all Acorns will obviously score well. Sound may be included, if you can accommodate it within your budget. Since you can only have two seconds worth anyway, this may not be a problem!

The deadline for entries is 30 October. As always, this is a challenge rather than a competition proper, so the number of 'winners' will depend on the quality of entries – if we get a lot of excellent ones, we might spread them over two issues. The best logos will be featured in the February 1999 issue.

Send your logos (you can send as many as you like) to the usual address in *Quit, and please mark your envelope **LOGO CHALLENGE**. You can also e-mail your entry – please follow the guidelines in *Quit too. So, good luck and happy logo-making!

*QUIT

All programs, hints, tips, this and that to:
*INFO, *Acorn User*,
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Macclesfield SK10 4NP
or, e-mail us (including your real address please) at:
austarinfo@idg.co.uk

No e-mail submission should exceed 100K please. Screenshots, program details and history, diagrams, suggestions for customisation – all are a pleasure to receive. We always have limited cover disc space, so cannot accommodate vast applications, tracker files or adventure games, however good.

You needn't include a letter but please put your name, address and program title on every disc and include a text file containing your name, address, disc contents and program details. A SAE will ensure your discs are returned. If you are responding to a challenge, please mark your envelope accordingly.

Compatibility table

Program	ROS 3.1	ROS 3.5+
!Tunnel	Yes	Yes
UR Here 13	Yes	Yes
UR Here 20	Yes	Yes
!Blobby	Yes	Yes
!Oranges+	Yes	Yes
Charabia	Yes	Yes
Euro	Yes	Yes
Father Jack	Yes	Yes
Gibber	Yes	Yes
Gogogoth	Yes	Yes
NameGame	Yes	Yes
Worldcup	Yes	Yes
!WhackAMole	Yes	Yes
!Wrap	Yes	Yes
!PC SetType	Yes	Yes
!SideClick		Yes
!FracWorks	Yes	Yes
PlasBall 12	Yes	Yes
PlasBall 13	Yes	Yes
RGB snakes	Yes	Yes

Taking *control*

Mike Cook creates an infrared remote control transmitter

Last month's logic oscilloscope is a perfect example of the computer as a tool and this month we will use that tool to create an infrared remote control transmitter.

When I have looked at this problem in the past, all the code has been written in machine code for the early 8-bit processor. Here I will take a different approach and present some modern ARM code.

Infrared everywhere

There are many different schemes for encoding data to be sent over infrared links and this technique should work for them all. However, I am particularly focusing on the sort of signals used in an infrared remote control. It's not only TVs and video recorders that use this nowadays, but also a whole host of other equipment like video editing suites, hi-fis and even computers.

To ensure that they don't cause interference with each other, they all operate slightly differently. The idea here is that we can use last month's logic oscilloscope to analyse the signal from a remote handset and use that information to recreate the signal using our computer.

In fact we don't have to understand the format of the data only the on/off times of the beam. Most infrared systems use a modulated beam to increase the peak power and provide immunity from other light sources, especially fluorescent lights. These lights are modulated or turned on and off rapidly at frequency determined by the electric mains. In short, they flash at 100Hz lighting up on the positive and negative halves of the 50Hz mains cycle.

However, infrared controllers use a much higher frequency – 38.4 KHz – this means they can use a tuned amplifier in the receiver that only amplifies these frequencies and rejects the lower fluorescence lights and the zero frequency of natural light. On top of this modulation we need to turn the beam on and off at a much slower rate to encode data onto it.

Data analysis

Our first task is to get the data stream from a handset into the computer so we can analyse it. I have devised two circuits that can do this, see Figures I and II. I have used a standard infrared detector in Figure I and a minimum amplifier so the handset has to be placed quite close to the sensor.

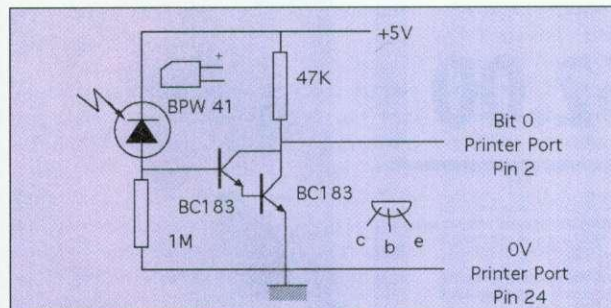


Figure I: An infrared receiver

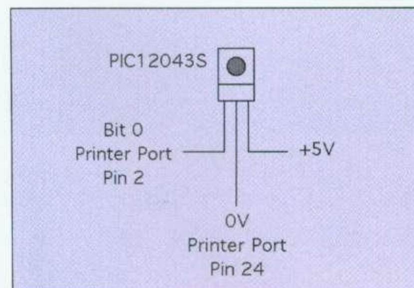
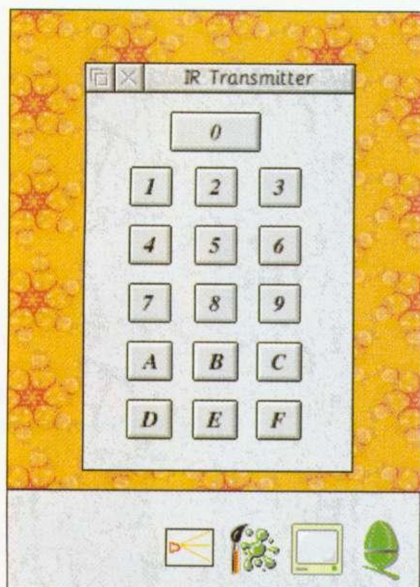


Figure II: An alternative infrared receiver

In Figure II I have used a modern component especially designed for remote



control applications. This has a built-in detector, light filter, amplifier, electrical filter, demodulator, integrator and comparator. As a result you can expect the normal infrared range of 8 to 15 meters.

The next job is to analyse the data coming from your remote handset so that you can reproduce it later. So lash one of these circuits up and fire up last month's logic oscilloscope, with it free running see that the trace waggles up and down when you fire the handset at the sensor. You will find that the pulse train repeats if you keep your finger on a handset key, adjust the sample rate on the oscilloscope so that you get at least two data signals on the screen.

Then activate the single shot mode and turn on the trigger for bit 0. Next, fire a burst of data for the first key you want to analyse. It is possible that the scope will have triggered part way through a data burst so you are best analysing the second data word so you know you have it all. Use the 'next change' measuring facility and make a note of each change interval in terms of samples. Keep the same sample rate and repeat it for all the keys you want to emulate. For this project there is no need to understand how the data is encoded, just the up/down periods of the signal.

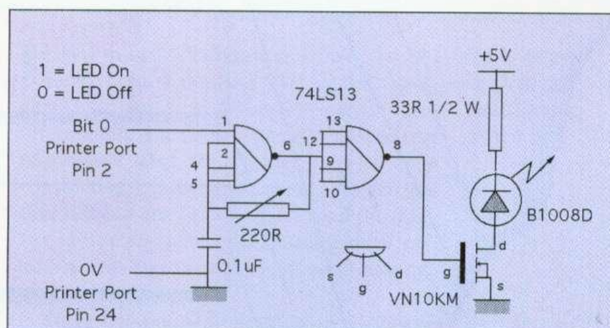


Figure III: The infrared transmitter circuit

Recreating the signal

Now we have to recreate this signal through the printer port. The hardware to do this is quite simple and again, just like the input side, there is a choice of circuits. Basically we have to turn an LED on and off, but when it is on, we need it to actually rapidly flash at about 38.4KHz.

Figure III shows a simple arrangement using a 74LS13 gate arranged as an oscillator. When the input on pin 1 is high then it acts as a relaxation oscillator with a frequency determined by the resistor and capacitor. Using the logic oscilloscope you can adjust the resistor to the correct frequency. Note, there is not a resistor in series with the variable so if you turn it to make the resistor too small the gate will stop oscillating.

The actual frequency is not too critical but for maximum range it should be within about 1KHz. The logic signals from the gate are then used to drive the LED through a VN10KM power FET. I use this because it has a high drive capacity and is relatively cheap, but you could substitute any sort of driver circuit here, like a Dartington pair.

If you don't want the trouble of adjustment or want something that is quite stable with temperature then you could use the circuit in Figure IV. This uses a CMOS 4060 chip which is actually a ripple counter. You can make the input oscillate by putting a crystal across two of its terminals. If the crystal is of the correct frequency, when it is divided down by the counter you will get the right flashing rate.

Here, the counter's reset line is used to enable or inhibit the output signal. Again I have used the power FET to drive the infrared LED. If you want more light output, or to send the signal in more than one direction, then you can wire another LED and resistor across the existing one. Note, you do need another resistor. If you want a visible indication of the computer

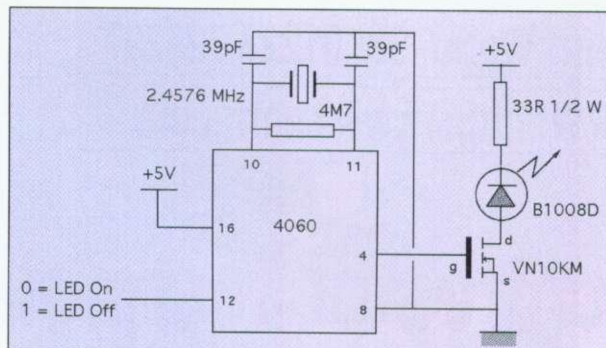


Figure IV: An alternative infrared transmitter circuit

sending data, wire a normal LED across it but this time use a 270R resistor.

The only snag with these two circuits is that they need opposite polarity signals to drive them. That is, one produces the light with a logic one on the input and the other with a logic zero, however, it is a simple matter to change this over in the software.

The software

Which brings me neatly onto the software, there are two versions on the disc – a desktop application and a simple BASIC routine. The latter is intended for you to incorporate into your own applications. However, in order to make it easy to enter the information about the up/down times of the signal, I have made both programs read the same file – it's located inside the desktop application and is called 'Codes'.

It is a simple text file and can be edited with any text editor. It can contain comment lines as well as the data for up to 16 key codes. The first number in it is the number of 2.5uS chunks the data is supplied in. You get this by dividing the sample rate you used when you analysed the data by 2.5. Then in the file there is one line per piece of data, the first number is the number you want to associate with this data followed by the on/off time numbers you measured.

Note that here there will always be an odd number of times if the LED is to stay off when nothing is being sent. Both programs have been written for the circuit in Figure IV and there are two lines of code you need to change for Figure III. These are in the machine code section and are marked with appropriate comments.

In the desktop application the data is sent repeatedly if the button is held down. This repeat rate can be changed by altering the number added to the variable Rtime% in PROCrelease.

So, with a little help from your computer, you can control all manner of devices. Making the control go the other way will have to wait for another project though. AU

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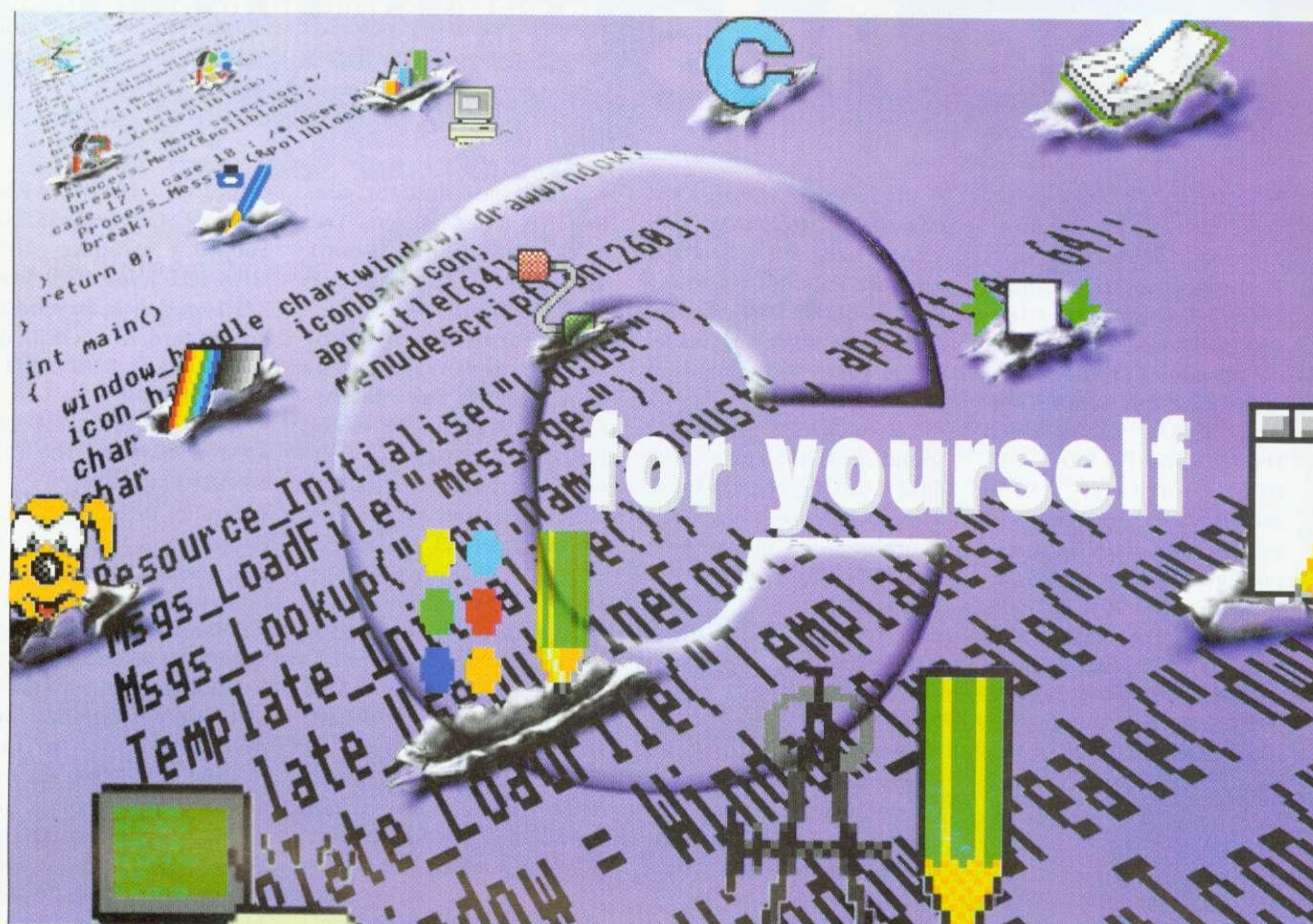
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JACK KREINDLER

C for yourself

Steve Mumford outlines the construction of the label printing application

In last month's column, I worked on the theory behind creating a set of data structures to hold our label layouts and information. Taking into account the concept of a master label, the scheme I decided upon consisted of a 'label' object that contained two linked lists – one for text objects and the other for imported *Draw* files – along with two address-holding variables that could point to two more such lists.

These two pointers would allow a child to hold objects of its own while still referring back to the master label for all its common fields. The 'label' objects could be stored as either a linked list or an array; the former is preferable although it does increase the level of complexity. The text and graphics objects both contain identifying strings, structures to store their position within the window, pointers to the actual data they hold and flags to remember whether they're editable. On top of those, the text objects also contain font name, colour and size information, and a priority variable to determine in which order the text fields should be stepped through and plotted.

Our next main objective is to decide which sections of the program we should code first, and what the overall shape of the graphical user interface should be. When planning the construction of the application, I tried to aim for an interface that was simple and yet provided the functionality we were after. One editing window would be catered for, and this would display the current label along with a toolbar allowing the user to flick from one entry to another. The intended feel is that of a deck of record cards; it's a representation that's been used in a wide range of applications and is one that most people can relate to.

Having one editing window simplifies the design somewhat, but it does mean that the user can only edit one label at once; on top of that, the effects of changes made to the master label on its children can't be seen immediately. However, this technique serves its purpose in the scope of our example and could be expanded later if necessary.

We should now consider some of the functions that the user will want to perform, so that we can build the appropriate code into the application from the outset. The editing window is constructed from a simple toolbar containing the usual navigation buttons and an information icon, with the actual label displayed underneath.

We've got plenty of opportunity for context-sensitive menus here; as well as providing options for the label as a whole (such as changing its title or freeing it from the influence of the master), each object within the label will be provided with its own individual menu – along with the standard cut, paste and copy functions, these would contain entries to change font name and size details for text objects and scaling information for *Draw* files.

All of these responses will have to be provided by the procedure we write to handle the **Mouse_Click** event, and we'll have to look at methods of creating the specialised menus used in font and colour selection when we tackle this area. Not only will each object have its own context-sensitive menu; all of these objects, unless explicitly excluded, will be capable of being dragged so that their positions within the label can be altered – this means that we will have to revise and extend the drag-and-drop code first seen in use during a simple save operation. Although bounding boxes won't appear on the printed page, their presence during dragging operations would greatly ease the procedure. Dynamic rescaling of *Draw* files would also prove extremely useful, and we could look at extending the dragging routines to include this functionality.

The redrawing routines will have a reasonable amount of work to do, so we might want to spend some time optimising the rather generous routines we've used in the past. Because the editing window won't be automatically redrawn, we can specify its precise layout, and although to start with the designs will be pretty straightforward, we'll have the opportunity to play with some more extrovert layouts and decide whether they lend anything to the user interface.

It's at this stage that we can work on the printed output, possibly investigating a method of exporting sheets of labels as native *Draw* files. Finally, with all this in place, we can work on other forms of data input and output, such as importing raw text or CSV files. While we're on the subject of file transfer, we could try our hand at direct memory transfer between applications to allow us to implement a simple version of OLE – I'll set the wheels in motion next time round. AU

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• Second slice for Risc PC, £30. 4 slot backplane, £15, PSU for above, £30, 700 processor + drivers, £45. 600 processor, £15. Tel: 01268-734215.

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• Modem, US Robotics Sportster 28,800 fax modem, £50. Contact Mike 0115-916 7951 (Nottingham) or e-mail ekim@lineone.net

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Isle be the designer!

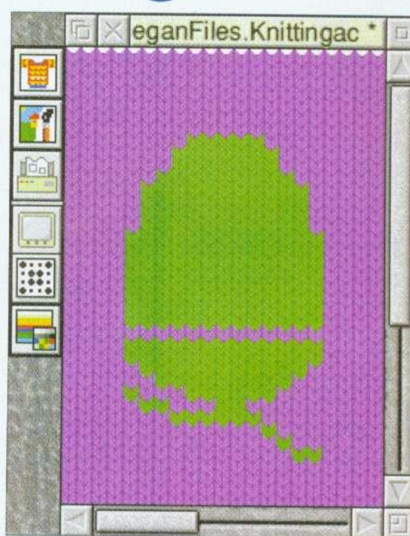
Jill Regan puts iSV's *FairIsle* through some ribbing

Punch cards for knitting and weaving were said to be the precursors of computing. Acorn machines have now come full circle and have a program which designs punch cards for knitting machines. Knitting is, after all, basically binary with only two stitches: knit or purl. The program is *FairIsle – the knitting pattern designer* from iSV, who also gave the platform *EasyStitch* for designing tapestries.

Fair Isle knitting uses a pattern of two or more colours and stocking stitch (which is the equivalent of knit a row, purl a row). On the punch card the holes knit the second colour and the blank spaces the main colour; the number of stitches of the same colour should be limited – avoid long floats on the reverse side of the fabric.

Traditionally, Fair Isle patterns were passed down by word-of-mouth. Designing new ones involves the laborious process of first designing the pattern using graph paper and coloured pencils, then making the punch card, then knitting a sample to see how it turns out. If you are not happy with the design, then you have to start all over again. It is both time-consuming and a waste of money. Punch cards can be expensive. *FairIsle* bypasses trial and error – what comes up on the screen is what you eventually print.

I jumped in straight away running *FairIsle* without consulting the manual, just to see how intuitive the program was.



A design for a Clan member?

It was great, literally within a couple of minutes I had something which normally would have taken hours.

When you run *FairIsle* you get a little jumper icon on the icon bar. When you click on the jumper three windows open: the punch card where you do the designing, the swatch which previews your pattern in colour, and the colour picker.

The punch card is the one you want to get started on. You choose the hole punch tool and click on the punch card window where you want the pattern. Simultaneously in the swatch window you get the pattern corresponding to the punch card appearing. This is in black and white.

To get colour, choose the colour you want as the background from the picker, then click on the row in the swatch. Then choose a colour and click on one of the stitches for the foreground. If you do not like where you have 'punched' a hole then simply click on it using the Adjust button and it is removed.

The average punch card on knitting machines is 24 stitches wide with as many rows as you want. *FairIsle* enables you to vary these and have cards up to 77 stitches wide and 200 rows in length.

You can use *FairIsle* for designing hand knits as well. I did find I could use it for designing punch cards for knitting lace, but this does take a bit more visualisation and imagination.

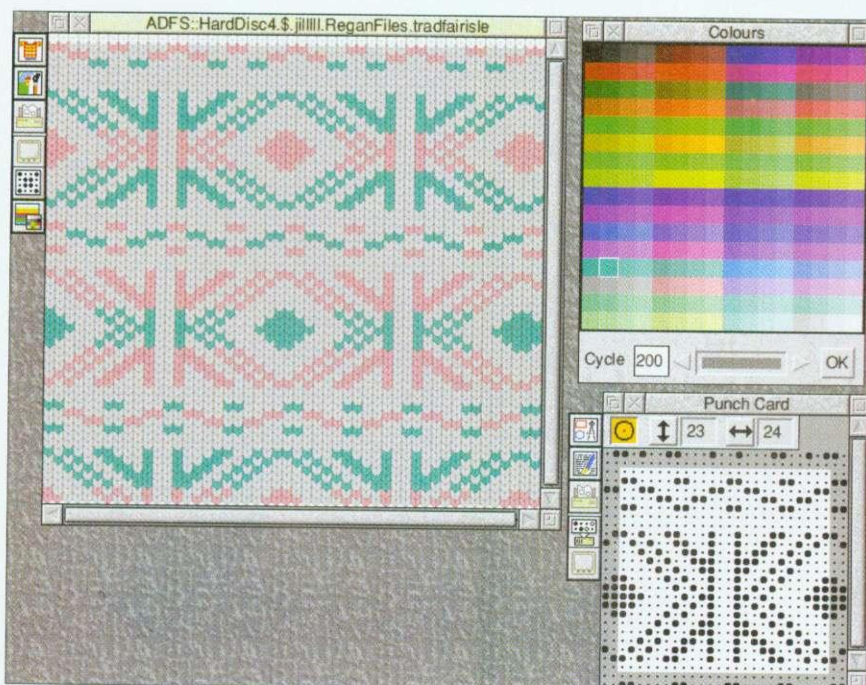
Although *FairIsle* will run with any screen mode, a mode with at least 256 colours and square pixels is best; your swatches will then look very realistic. Its 'knit as you punch' feature (which shows you on the swatch how the knitting will look as you make changes to the punch card) is empowering because it gives you instant feedback – you no longer have to spend time knitting a test pattern to see how your design will look. It's the knitting equivalent of WYSIWYG.

As with other iSV products, the manual comes as a small hypertext document that you can have on-screen or print out and keep as a booklet.

You can print both the punch card and the swatch. The swatch, if printed at 100 per cent in the big stitch mode, gives seven stitches across and nine rows down to the inch – an average piece of knitting. The punch card design can be printed the same size as a punch card, so it can be laid over and punched (using a punch tool) in the right places. No need for counting, just punch where the black dots are.

FairIsle is a very good niche program. It does not need any great knowledge of either computing or knitting to make it useful. It would be ideal for knitting designers, students and pupils as well as the hobbyist. If you or someone you know has a knitting machine then this is a real must. You never know, you may be able to design your own Clan cardigans and matching accessories to give as Christmas presents. Happy knitting.

About the Author: Jill Regan writes The Regan Files and once taught machine knitting to a delegation from the ANC.



All three FairIsle windows in action

Product details

Product:	FairIsle
Price:	£31.50 inc UK p&p
Company:	iSV Products
Address:	86 Turnberry, Home Farm, Bracknell, Berks, RG12 8ZH
Tel:	01344-455769
E-mail:	atimbrell@aol.com
WWW:	http://members.aol.com/isvproduct/

Rambe...

Aco... Wo...

Another questio... with Me...

I came across some more good ideas for encouraging people to register shareware this month. The first one was by putting up a small window as a reminder to register whenever a menu item was selected. It was only on for three seconds and had a small countdown in the corner but it was sufficiently annoying to stop you working at the rate you wanted to. However, all the functions were still intact so you could see exactly what you would be getting. The other idea is from a strategy/space game on the Mac. After you get past a particular level, every time you land on a planet you get taxed half your money because you have not paid the shareware fee. Two pretty neat ideas.

I have been transferring some text over from my Mac this month and was rather irritated about some subtle changes in what was supposed to be a raw text file. For example, the apostrophes and quotes come out as a strange symbol and the end of line terminator is different. Therefore, I wrote a little application to just go through the file and make these minor corrections – it's on the cover disc for your delectation.

Let's start off with some welcome feedback from previous months. Graham 'Jades' Thurlwell remembers seeing an Amiga emulator:

I saw Adam Merrifield's request in the August *Acorn User* for information about Amiga emulation on Acorns, and might have the answer. The only Amiga emulator I know of that has an Acorn version is UAE (used to stand for Useless Amiga Emulator...). This is available on the Web but I seem to have lost the address.

I haven't used it myself, but I think that it will follow the general rule of emulation – Your Mileage May Vary. It should run at a decent enough speed on a fast Risc PC. As far as I remember, it emulates an Amiga A500 (one of the old ones).

However, David Coulson can remember the site, it's *http://www.freiburg.linux.de/~uae/*

I had a look and here's what it said:

!UAE (563K) is a port of the Unix Amiga Emulator by Bernd Schmidt for the Risc PC under RISC OS. You will need at least 12MB DRAM and 1MB VRAM is strongly recommended. With an Arm610 it is not very fast at around 1/6 of the Amiga 500's original speed, and for games and demos even slower at around 1/30 of the speed.

A StrongARM is about 5-8 times faster and now also works fine. UAE has a much improved front-end that has online help via !Help for all Config options. For space and copyright reasons I can't offer more software, but you can get all that you might need from Werner Zsolts UAE Home page. A lot of demos are available from Peter Schau's UAE Home page For RiscBSD get the original source code from Bernd and compile it with the GNU C compiler. Actual version: 1.14/0.6.9 (24.6.1997)

Tony Houghton has some advice for Chris Murry who asked about advice in upgrading his hard drive:

Transferring files from old to new isn't as much a headache as you might think. Simply disconnect the CD-ROM, change the links on one of the drives so it's a "slave", find somewhere to balance it inside the computer and connect it where the CD was, then you've got two drives for as long as you need to perform your backup.

APDL offer good trade-in deals and even send the new drive before you return your old one and loan an IDE interface to make the backup easier – you don't have to reconfigure one of the drives as a slave. However, you may need to disconnect the CD-ROM to gain a power connector and some hard drives need a further link changed depending on whether there is a slave on the same circuit.

Luke Bosman similarly sings the praises of APDL:

I'd just like to inform you of APDL's excellent service which allows customers to borrow an IDE interface while they copy software from one HD to a new one. I made use of this service after seeing the offer at the Wakefield show and having considered the cost of Zip drives. My decision means that I can now use a 4.3G IDE HD and did not need to spend any more than the cost of that drive. I also found that it would cost me less to install a removable HD system than to obtain the equivalent amount of storage in Zip discs.

Now onto the new stuff. Mr Chapman from Plymouth wants to know what happens when he deletes files:

A recent article in the *Daily Telegraph* supplement *Connected* made me think again about disc space on both hard and floppy discs. This article, aimed at PC owners, stated that deleting a file from the hard disc removed only the file address leaving the file contents intact but invisible and still occupying disc space, requiring disc reformatting to regain the space.

A friend of mine, a PC/Windows 95 owner bless him, also told me this some time ago but my expanded A3010 does not seem to suffer this on either the hard disc or floppies. If I delete a 5Mb file from the hard disc the ADFS "free space" check indicates that I have regained that space, if this is not true then the "free space" check is fibbing.

I believe that any loss of disc space is due to its "fragmentation" which can be regained by reformatting. I read about disc "fragmentation" in an old *Archive* magazine, it was referring to floppies by the way. Could you please tell me what happens when a file is deleted from the Acorn system hard disc and also explain the mechanics of disc fragmentation and does this apply to both hard and floppy discs?

I know the PC is bad, but it is not that bad. There is probably a bit of confusion here with the way Windows works. It is possible to delete the file group in Windows so you don't see the application on the desktop but that does not delete the files associated with that group. To do this you have to use the filer, and then you will recover the disc space. The big problem with the PC is that an application might spray files all over the place with strange file names so you don't know what to delete. The Acorn machine, just like all computers, doesn't actually delete the file there and then but marks the space as free to use. Providing the file hasn't been overwritten, it can then be recovered by some software jiggery pokery.

However, you do get this free space to use for other files. There are some security utilities that actually write over a file with rubbish prior to deleting them, but you need to install these separately. When a disc has been used a lot for storing and deleting files the free space can become fragmented across the disc surface.

The older floppy disc formats required files to be stored in consecutive segments on the disc so a situation could arise where there were enough free segments to store a file but they were not all together. Hence the command *Compact was designed to shuffle the files about on the disc so that all the free segments were together. This was a problem only on the old floppy formats of type L and D and the old map hard drives.

The newer file formats are designed so that a file may be split up and stored in non-consecutive segments, if necessary, so side-stepping the problem. However, if a file is too fragmented it can take longer to load. Therefore the *Compact command still has a place in modern day Acorn machines. Note however, that this does not defragment files that are already fragmented but just prevents new files being fragmented.

There are utilities that can examine the discs directory and defragment files but these are not built into the operating system. As good practice you should compact your hard

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...and answer session

...ike Cook

drive regularly, I suggest each time you receive a new copy of *Acorn User*.

Mark Grocock is just learning the black art of BASIC WIMP programming and wants to know how to start up an application:

I have just learnt how to use *Set Alias$@RunType to specify run action for a file type e.g.

```
*Set Alias$@RunType_200 Run
<Obey$Dir>.!Loader %%*0
```

to make it load the file '!Loader' when a file type 200 file is double-clicked. How would I get the name of the file double-clicked on into file$ so that I could use the OPENIN command ?

What you need to do here is look at the environment string with a SYS'OS_GetEnv'; if you have launched an application with a double-click the file name will be in here. I have put an example of this on the cover disc and when I use this it is normally called before entering the 'get event' loop.

However, there is a bit of a snag with it. My normal mode of program development is to use *Zap* and press F1 to run the program. With this procedure called things tend to jam up, therefore I rem out the call to this procedure until I am ready for the released version of the application.

Robert Waters from Spalding is having a bit of bother with his sound system:

I have a second-hand A4000 with a rather temperamental sound system. Sometimes it works just fine, but it goes through patches where audio output is either very quiet or very distorted. It has been like this since I bought it. The problem is the same with earphones as well as with the internal speaker. Any ideas?

This sounds (no pun intended for once) like a classic case of loose connection syndrome. The snag, as always, is tracking it down. The computer has a stereo sound system, so the first thing to do is to put the headphones on and see if the problem is in just one side or both.

The simplest to cure is if the problem is in both sides because that eliminates a lot of components and leaves only the common wiring. Of this the most likely cause is the power supply wiring, the sound system has its own decoupled supply. This passes through a choke and is also connected to pin 11 of the VIDC, the chip that generates the sound. Check around here for loose connections or unsolder joints.

The procedure is to apply pressure to the components with you hand and see if you can make it go wrong. It's rather like a dentist prodding at your teeth, you make a noise when he hits the bad one. If it's only on one channel then the procedure is the same, but you have all the filter and integrator circuits to go through which makes it a lot more complex. Happy hunting.

Harry Smith from Cheadle is upgrading, but has problems:

I decided recently to transfer all my old *Viewsheet* files from 5.25in discs to 3.5in to run on my A3000. Having done this I find that I will have to have *Viewsheet* installed as well. This is on ROM in my old BBC B'. I seem to recall that it's possible to save the contents of a ROM onto disc but I can't remember the commands.

You can get a dump of a sideways ROM onto disc, but it was not just a matter of typing a command. At best it involved running a small utility program. However, there is not much point because once you have it on disc there is really nothing that can be done with it as the code is for another processor. Yes, I know you can get an emulator, but as far as I know it won't run sideways ROM code. Does anyone know of a way round this?

Robert Brockway from Salisbury wants to spice up his desktop:

I am 14 and have been using an Acorn since I was about 8 years old. Back then we had an A3010 but last year we bought an A4000. We are very happy with what we have and don't have any plans to change it yet.

Recently though I went to a friend's house to see his Risc PC 600. I was amazed at the beauty of the desktop and ever since I have been trying to copy it using !SetIcons.23Sprites and various !StrongHelp manuals for the screenshots. I have got as far as altering the iconbar icons and the sub-menu arrows. I don't know the first thing about WIMP programming and I only know the basics of BASIC.

Here's my problem. I don't know how to change the iconbar texture, the title bar texture, the sub-menu bar texture, the scrolling bars, the text outside the filer e.g. in the sub-menus, and the tools on the windows. Not much is it?

Basically, what I'm saying is that I can change the Resources.Wimp.Sprites but I can't change the Tools. This is extremely frustrating as I am the most experienced on our computer and I can't ask anybody for help. Please, if there are ways of changing this, preferably with !SetIcons, I would be most grateful if you could print them. Or tell me if what I am doing is totally illegal!

Well it's not illegal for a start, but you can't change all those things. However, you can go a good deal of the way to customising the desktop look. Windows and scrolling bars can easily be changed, for an example of how to do this then look no further than the August issue of *Acorn User* and Keith Gaughan's contribution to the *Info pages.

Gareth Lock has been having a rummage through his back issues:

In the October 95 issue of *Acorn User* you published an article about how you can connect two joysticks to the parallel port. I am wondering how feasible it would be to add a printer pass through connector to the circuit. Would this need any extras?

Well I had to have a rummage to see what I had done myself. Unfortunately this project uses the printer port in the input mode and uses the strobe line as power. In short, it's not very suitable to make a simple bypass circuit short of a complete printer switch. There are commercial alternatives about that address this problem available from many manufacturers – see the adverts in the magazine.

I have inspired Steve Harratt to venture into a new area of computing for him and now he wants more:

I have just completed your projects for the temperature monitor and the oscilloscope and was surprised to find that both worked – normally I don't have much luck with such things. Now I am spurred on, can you suggest where I might get further info on projects that can integrate with the computer? I am particularly interested in weather measurements.

Well the best thing is to keep reading *Acorn User*. Alternatively you could always track down my old projects on my Web pages at http://physics.mmu.ac.uk/Acorn as there were a lot of weather-related projects in the early days for the model B. Although these will need some updating of software for the more modern machines. My website has been down lately due to a faulty computer but hopefully it is now running again.

Finally John Chaffey wants to know how to get better access to the Web.

My ISP used challenge handshaking access protocol. I don't know if it's possible or how to get *!Browse* to connect to it as the scripts are all for PAP access.

Unfortunately I haven't got the answer does any one know?

BACK issues

Missed out on one of our previous issues? Now's your opportunity to bring your collection up to date. But hurry – stocks are limited



Issue 198 – September 1998
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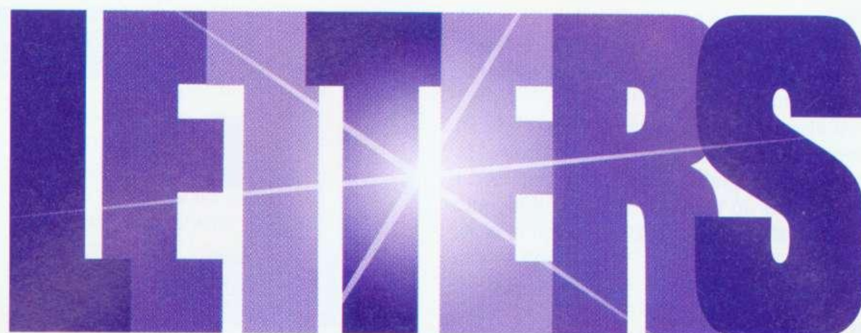
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Printer preferences

Do you plan to re-name the magazine *Acorn and PC User*? I have just finished reading your August edition printer review. I do not see what earthly use it is to me to know what kind of printing results you can achieve using the proprietary PC drivers and a PC. What I really want to know is what kind of results can be got from an Acorn computer linked to a printer, together with details of the printer driver used, whether this be an additional piece of software or the standard Acorn-supplied kit.

I know that Acorn computer users are limited in their choice of printer, but surely a more sensible approach to the review would have been to look only at printers which we know can be made to work?

Daniel Fyles
xcdoulos@dfyles.demon.do.uk

Printer technology has improved dramatically in the last 18 months. Unfortunately, RISC OS support for new printers has been unable to keep up. However, companies such as Spacetech are showing some resolve to catch up and even Acorn is promising to re-engineer their drivers to embrace the most up-to-date printers, many of which we have been looking at.

While many of the best printers are not yet supported natively in RISC OS, we certainly hope and expect many of them to be supported some time in the not-to-distant future. In the meantime, if you do have a PC card fitted to your Risc PC, you can make an early investment and use these printers straight away.

Ian Burley

Code protection

I agree with Justin Fletcher (August 1998 issue) because how the heck are we supposed to learn with people scrambling. You can't get any teachers for Acorns where I live. They teach things that are the same, like HTML, because they use a PC. Programming Reference manuals are too expensive – Acorn or Xemplar should do something about it.

Matthew Carter (Age 10 1/4)
mattcarter@argonet.co.uk

and again ...

Justin Fletcher made some valuable comments in the August edition concerning the compression and compilation of BASIC programs, hiding the code from the interested user. Mr Fletcher feels that this hinders the learning of beginners and enthusiasts – such as myself – who would greatly benefit from the skills they would acquire simply by reading the program through.

I would never have got anywhere if it hadn't been for my adventures through other people's programs in the early days, and I still do it now every so often. For security reasons and memory saving, I can see why you want to compress programs – I do it myself, and this doesn't bother me too much. (Get a copy of Graham Crow's *B-Format* program.)

But compiling is a bit much for the every day utility, and it's also very messy – BASIC is an interpreted language, it was never intended for compiling. Except for the occasions when speed and security is paramount, it would be nice if programmers would leave their code as it is, or even leave a textfile sample of areas of interest. In the Acorn Community, we should be keen to help out one another. Be friendly!

William Simpson
Lincoln

By sheer coincidence (honest) B-Format is part of the Basic Programmer's Toolkit we had on offer last issue.

and again...

I agree with Justin on many of his points about why programmers shouldn't crunch their code. I'm crunching some software ➤

Great pretender

Firstly, I'd like to agree with Justin Fletcher when he says that you don't need to own the latest machines in order to be a "fan". Sure, I'd love a Phoebe to replace my greatly-twiddled A5000... but it isn't the machine you own, it is the way you see the philosophy. Small, compact, to the point. That is RISC OS.

Unlike Justin, I do feel a commitment to Acorn. For my Open University course, I bought a PC. It helped me to know that everything written by Microsoft is visually quite impressive, with a features list to match. But when you get down to actually using the system, I didn't think it was up to much.

RISC OS, on the other hand, doesn't spend its time pretending to be something it isn't. So we don't have pre-emption. So we don't have virtual memory. So we don't have much in the way of memory protection. I'm quite happy with my system. It works. It is reliable. It has a nice assembler and BASIC that you aren't embarrassed to use.

And another thing...

That leads me on to my next point. Justin Fletcher mentions code protection and how it is a pain to get into programs to learn from them or see what they are doing. I can only speak for myself here, the reason I compress my programs and turn them into an absolute file is twofold. Several years ago I wrote programs that were largely unprotected. A certain individual decided to modify one of my programs. He obviously didn't have enough braincells to figure out my code (which is a little, er, eccentric) and all kinds of horrid things happened. Horrid things that this person was all too quick to mention on fidonet, conveniently forgetting to mention that the program had been "hacked".

It was around then that I started experimenting with code encryption. Further on, I discovered software such as *BasCompress* which allowed me to reduce the active code to more than half its original size. This is very useful when you can reduce a 380K source down to 120K or so. The final part of the puzzle is to turn the file into an Absolute file by bunging on a little assembler header. Why bother? Well, it allows you to use Acorn's *!Squeeze* application to make the program even smaller.

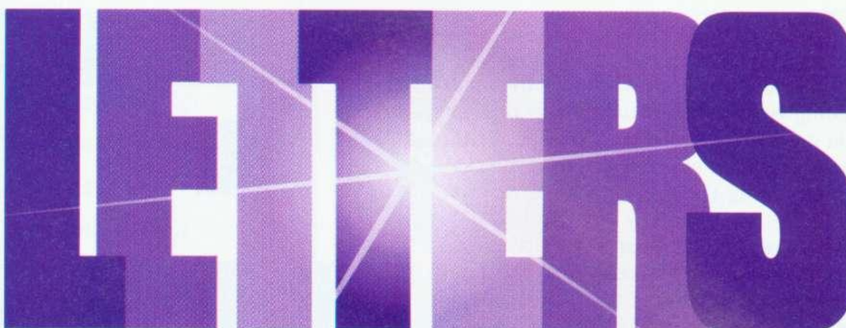
I too learnt by taking apart other people's software, and I think that this is a method that should be encouraged. Did Mr Fletcher consider asking the software author for a copy of the source code? I'd be happy to give some of my sources to programmers wishing to fiddle around with the code and see what is going on. I'm not ashamed of my code, no matter how weird it is. The only reason it is distributed in a mangled form is to prevent further occurrences of the event I mentioned previously.

Richard Murray
rmurray@argonet.co.uk

I've written recently because I don't really want people seeing my code, as many parts of it are not good examples for budding programmers.

It also stops the users who think they can tweek the program from causing problems. Once my programs are fully written and I have tidied up the code, then I will happily provide the source code for people to look at.

Adam Evans
adam@cje.co.uk



A real education

Having used *HyperStudio* recently on a college course, I was interested in your comments. While I was impressed with the PC version, I found you really had to jump through hoops, and I struggled with it. So I gave up, bought the Acorn version for home use and went at it half-heartedly – what a difference. RISC chips and maximum power.

In the end, my project ended up as 20Mb of disc space on my A4 portable. It would not run on the PC as the /STK commands would not function, which, in the end showed up the new PCs from which it was supposed to have been videoed.

I think that Acorns should be supported as much as possible in education. There is no way a pupil of mine could cope with the limited functions of the Windoze version of *HyperStudio*. All credit to David Miller at TAG for his development work. I look forward to his new updated version. Thanks also in public to fellow Argonaut D. A. Symes for his help in the Animation sequence.

Chris Ward

From a land down-under

As an IT teacher, I have used Acorn hardware and software, both personally and in teaching, since the original BBC Micro days. The Acorn systems we have used (BBCs, A3000s, Risc PCs) have always given exceptional service – the curriculum software has been either more applicable or adaptable to the NZ curriculum than offerings from the USA.

The hardware has been robust, secure and RISC OS has offered a standard interface that has been consistent since the original Archimedes. Indeed our A3000 network is still running well, although we are about to shortly replace this with an NC network.

Since the demise of Acorn NZ last year, the Acorn product (which only ever really had any presence in the education market) has virtually disappeared. The appointed wholesaler for Acorn hardware has not promoted the product at all – indeed they have probably used Acorn's mailing list to try to sell their own PC product into schools.

The Acorn dealers, who once gave excellent service, advice and backup, have removed the Acorn name from their logos and are now selling PC and Macs into the education market. The same pressure to "use Industry Standard IT solutions" (Wintel) that seems to be pervading the British education market, is even more widespread in this country.

Acorn's strength has always been in research and development – particularly hardware. Unfortunately Acorn could never actually get out and market their product widely outside of the education market, or indeed outside of Britain. RISC OS is an excellent OS – dated in several areas now, but still compact and stable. In New Zealand, Acorn computers are perceived as being too expensive. This has long been a criticism and still holds true.

Pricing, particularly on a world market, has to be competitive – in this country one can buy two fully specified Compaq or Hewlett Packard Pentium II 266MHz PCs loaded with software for the price of one Phoebe.

Phoebe (personally, I don't like the name or the colour) is not really the dream machine that Peter Bondar promised us

Bad form

With reference to Grahame Peterson's infamous contribution (Letters, June 1998): Sorry, I think you are seriously mistaken. For your sake, I hope all the Acorn users out there can forgive you. As for my thoughts on the subject, I want to congratulate and heartily thank all the faithful and loyal people out there who are putting so much time and effort into the work they do. Your efforts are really appreciated.

William Simpson
Lincoln

As the debate continues to surround Grahame Peterson's letter virtually commanding that we all sally forth to buy the latest Acorn kit I thought I'd pitch in. I accept that for Acorn to remain commercially viable they will need a larger market, but this must be gained through a proper appreciation of consumer needs from Acorn and abilities to support Acorn. There are two proposals I can make based on my own interest in the technology, technology design and the media.

Firstly, if Acorn are to penetrate a broader market then there must, like the PC market, be a budget entry level machine. sub-£500 or, better, sub-£400. It must appeal to the wide market of potential budget users at home, in schools and in small businesses.

To achieve this I propose that it be sold direct, cutting all dealer and suchlike overheads to keep within that target price; and though Acorn dealers might not like it they could look to this as an opportunity to sell on the software, accessories etc, as a broader community of enthusiasts is established. Participating dealers can also take on the servicing responsibilities for a modest added "insurance" fee on each sale.

Secondly, to broaden the popular understanding of Acorn's value, its reliability, performance and so on, I propose to produce a film telling the history of its technology, "its world's firsts", benefits and sample stories from users in schools, the home and business. This project can be supported by participating dealers and Acorn product suppliers, contributing cash and kind to the film's production, and seeing the completed film as a long-term advertising channel, a means of informing the wider public and a way of countering the competition's propoganda. With enough interest from the Acorn community the Workstation Division might be persuaded to, say, provide matching funding for the film and its distribution.

Either of these projects, and a few other proposals I could make, can give the Acorn platform a chance at prosperity into the next century. So if anyone knows of an Acorn-friendly source of venture finance I'd be happy to discuss matters further. Please write to me at Norfilms, PO Box 174, Stockport, Cheshire, SK5 6LB.

Michael Bond
Norfilms



back in 1996. Lots of compromises have been made and while some improvements are obvious (faster bus, PCI slots) the machine is not cutting edge technology, certainly not at the asking price. Where is the multi-threading, multi-processor support?

There are some bright spots. While the NC model has not gone the way of Larry Ellison's predictions, it is a very viable system for use in school and business "intranets", and in the UK, Xemplar seem to be running with this model. The price seems to be reasonable too, although it is a pity Acorn are not a little more aggressive in marketing their NC model – after all, they really invented it. At a recent Acorn NC demonstration in New Zealand (to a wider, non-Acorn audience), the Windows NT/Citrix side was emphasised but there was only passing mention of the fact that current NCs also run Acorn software "native".

On the positive side other companies are licensing RISC OS – the Peanut, if it goes into production will fill an important product gap.

I think Acorn should stop changing management and reforming the management structure, develop a business plan, identify markets (education could still be one) and keep producing quality, high specification desktop hardware at competitive prices, a maximum of £1000 – after all, a 233Mhz StrongARM processor is only $US30 per unit compared with $US500 for a 300Mhz Intel Pentium II?

Software support must also continue – it was disappointing to read that Acorn have dropped development of the *Macromedia Director* reader. I would like to see more of the "standard" internet plugins and filestypes developed for the Acorn platform and Acorn browsers. *RealAudio*, *RealVideo*, *Director*, MIDI, *Quicktime* and AVI files should be playable within a browser window – as with *Netscape* and *MS Explorer*.

The ability to convert *Replay* files both to and from the "standard" video formats would also be welcome. The Acorn *!Printers* application needs a major re-write, and *!Draw*, one of Acorn's more useful apps, could do with a "make-over".

In terms of software development, the Acorn community is well served by a dedicated bunch of shareware, careware and freeware programmers, as well as small commercial software houses. I hope these continue to do their "stuff" but I think Acorn should take some leadership in co-ordinating software developments and marketing, perhaps on a contract basis.

Peter McCaskill
(HOD IT Geraldine High School, New Zealand)
petermc@voyager.co.nz

The difficulty with your solutions to Acorn's problems is that they all require vast amounts of money. And while Acorn aren't as poor as they were a few years back they still have to watch the purse strings.

Suggesting they don't have a business plan is rather outrageous, and contrary to appearances they don't "keep changing their organisational structure".

While Acorn rebuild themselves there are bound to be times when things look bleak and certain areas have to be ignored. But that doesn't mean the future is hopeless, far from it.

An appeal to Acorn User...

Who remembers the Yellow Pages? All those lines and lines of listings we typed in to get running programs?

I know it is convenient now that each issue has a cover disc, however I am quite sure that your Yellow Pages helped me in two ways. Firstly, by reading and copying the programs into my computer it helped me get the better of part of my dyslexia. Following many programs I can now type and copy type quite well. This may be able to help other people with similar problems.

Secondly, by typing in the program you gain a unique insight into how the program works. This is something that does not happen if your experience with the program starts by double-clicking its icon.

So *Acorn User*, would you please consider restarting the Yellow Pages?

Richard Murray
http://www.argonet.co.uk/users/rmurray

The Yellow Pages had their place – and their time. It's certainly true that Acorn users are far more likely to want to program than PC owners, and to learn from copying programs from the printed page.

But it's worth realising that listing pages only ever existed because there was no other convenient way of distributing programs. If the computer world had come into existence with floppy discs at a price that made them acceptable as cover mounts and every machine had had a disc drive, you would never have seen the Yellow Pages.

The day of the type-in program is long past and will never come again.

Air your views

If there's something you want to 'get off your chest' or you have some interesting information for your fellow *Acorn User* readers, then write in to:

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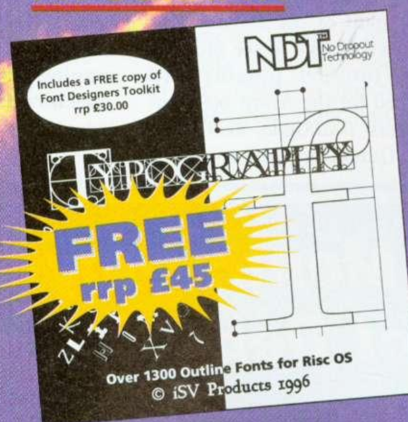
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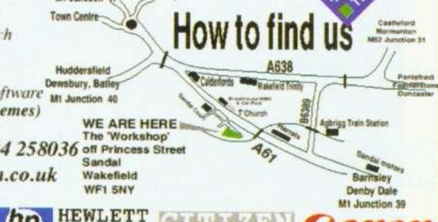


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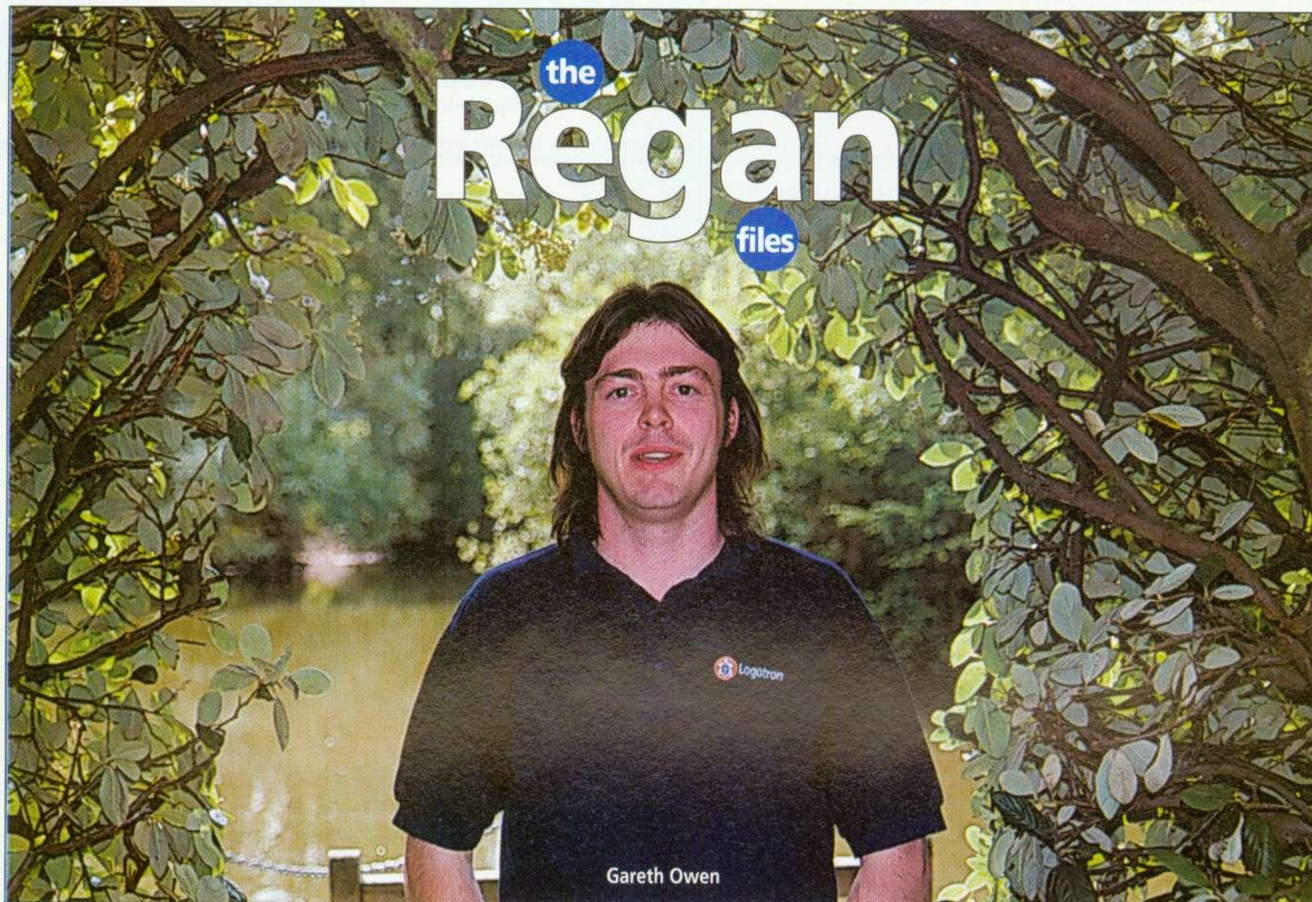
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Gareth Owen

Life is full of things which are not quite what they seem. I am sitting in what appears to be a pleasant country park, but it is actually the Trinity Centre, bang smack in the middle of the Milton Science Park in Cambridge. I'm here to talk to Gareth Owen, Education Sales Executive for Logotron. Gareth has a reputation for being a bit of a 'lad', as anyone who knows him from various Acorn shows will confirm. But today Gareth is nervous.

Gareth is a bit of a footie boy and has been known to turn up to shows wearing an England strip. He also puts his foot where his mouth is (so to speak) and plays midfield for Bottisham FC, a local side. 'Gerry Daish, my boss here at Logotron, runs the football team. Training started last night and my legs are killing me. I had to do a four mile run to warm up.'

Although he now works for Logotron, Gareth's first steps in the Acorn world were working for Dave Clare.

'I worked at Clares both man and boy,' jokes Gareth, 'so it was a big wrench to change job, and city, but it was something I had to do for myself, to seek new more challenging horizons. I started working for Clares because one of my relatives knew Dave. At the time I was bored, working up to a management trainee position in a building society. I jumped at the chance, even though I knew nothing about BBCs; I had been a Commodore boy, games and all that'.

After a baptism of fire – being sent to the Manchester science museum to demonstrate the original *Render Bender*, never having switched an Acorn machine on before – Gareth soon got into the swing of things.

'At Clares I did all sorts of things. It's a small company in a small office, but the image is bigger and of a very high standard. The hard work was making it big. I assisted in every part of the day-to-day running of the business, except programming. I have done top-end executive stuff through to office junior. It has all proved to be invaluable experience.

> I do not want to be classed as a salesman: I don't flog used cars

'Some of the best memories I have are of the days of the Acorn Roadshows. We – that is, lots of different software houses – would meet up at Acorn on a Sunday, board a coach which would take us off to a venue, usually an IT centre, where we would get up early the next morning, and set the show up. We'd work all day at that show and then move on to the next, so it was gruelling – five different venues in five consecutive days.

'As far as I am aware, no other computer company has ever done anything on this scale. It was amazing – all these people who should have been competitors working together. We worked hard and liked to play hard'.

It was mostly from these trips that Gareth got some of his reputation. He will tell unprintable stories about drinking, people falling through glass tables and so on. Although he admits that now he is 'much more likely to be found on an old man's sightseeing holiday than in Ibiza with 10 mates'.

'I am quite a shy bloke when it boils down,' confesses Gareth. 'If I get a work head on me my confidence builds. I prefer to sell a product I believe in rather than try and sell sand to the Arabs. I do not want to be classed as a salesman: I don't flog used cars. I like to think we are providing a service.

'I prefer to go to a school and if I have not got anything for them, tell them that. This is the way the world should be and, if you look at it from a business sense, repeat business comes from fulfilling a need and making sure they know other things are available. This is why I work for Logotron.'

We wander back to Gareth's office where he has a pile of papers on the government's new education policy. He needs to know everything in them if he is to keep ahead of the market.

Gone are the days when teachers used to write their own programs. The education market has grown up along the way and Gareth seems to be growing up too.

Jill Regan AU



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All computers are supplied with Studio 24 v1 software and one years subscription to the Virus Protection Scheme.

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General Upgrades

Harddrives - (p/ex for new RiscPC 1.2Gb HD)	
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Other sizes available - please ask	
Backplanes	
2 slot backplane	£ 34.00
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MIDIMax II - Midi Card	£ 92.83

RiscPC Memory

1Mb VRam	£ 69.00
2Mb VRam	£ 89.00
8Mb SIMM	£ 14.00
16Mb SIMM	£ 24.00
32Mb SIMM	£ 33.00
64Mb SIMM	£ 129.00

PC Cards & Software

DX4-100 PC Card	£ 229.00
586-100 (Acorn) PC Card	£ 329.00
586-133 (CJE) PC Card	£ 351.33
PC Pro & PC Exchange	£ 49.95
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Monitors

Acorn 14" AKF60	£ 264.00
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Iiyama 17" 400 Pro !NEW!	£ 385.00
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CTX 14" Digital Scan	£ 139.00
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CTX 17" .26 92Khz Digital	£ 385.00

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56,000 Flex modem - Flash U/G	£89.00
Acorn !Browse (CD only)	£39.99
Ant Internet Suite software	£116.33



Flatbed Colour Scanners

There are now a growing number of scanners which will work on RiscOS. The Epson GT5000 and the Plustek work on the parallel port so no extra interface is required.

All our scanner prices include Twain and Imagemaster software. SCSI scanner prices do not include the SCSI connecting cable. Studio24Pro instead of Imagemaster - just £30.00 extra!

Epson GT5000 parallel	£239.00
Epson GT5500 SCSI	£259.00
Epson GT9500 par&SCSI	£519.00
NEW!!Plustek Optic Pro	
New low price!	£129.00

SCSI Cards & Cables

Cumana SCSI II Card	£175.00
EESOX SCSI II Card	£145.00
50 mini 'D' to 50 Centronics	£16.00
50 mini 'D' to 25 'D' plug	£16.00
25 'D' plug to 50 Centronics	£13.99

Switch Boxes

These are ideal for parallel port switching between a printer & scanner

Parallel 2 way	£16.99
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25 'D' plug to 25 'D' plug	£4.99
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Male-male mini DIN keybrd cab	£3.00
Mini DIN to 5 pin keybrd adptr	£1.50
5 pin DIN to 5 pin DIN keybrd	£2.50

Many other types also available please ask



Hard Drives

Pineapples removable drive system is available for IDE and SCSI systems.

IDE removable system	£19.00
SCSI removable system	£25.00
IDE or SCSI cable	£5.00

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1.2Gb IDE !!!!	£50.00
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2.0Gb IDE	£109.00
2.5Gb IDE	£119.00
4.3Gb IDE	£139.00
4.3Gb IDE (Cyclone 5.25")	£139.00
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Bare SCSI harddrives

1.0Gb SCSI	£119.00
4.2Gb SCSI	£219.00
6.4Gb SCSI	£299.00

ZIP parallel port drives

Iomega parallel port ZIP drive	£149.00
Iomega SCSI internal ZIP	£129.00
Iomega internal IDE ZIP (for use with IDE expansion card)	£75.00
100Mb ZIP cartridge	£9.99
Pack of 5 Zip Cartridges	£45.00

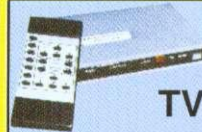


Studio24Pro

'Many Acorn User front covers have been created from scratch using this program alone, concrete proof of the power of this creative tool' - *Acorn User Mar96*

Now just ★ £99.00 ★

Users note FREE update v2.16 is now available.



PAL TV Coders

We now have two PAL TV coders available which allow the output of any Acorn Computer to be displayed on a normal TV or recorded onto a video recorder. Both models have S-VHS as well as standard video outputs. The VGA converter works in VGA and SVGA screen modes and is ideal for the RiscPC. Please ask for more info.

VGA Converter PAL Coder	£159.00
PLC/4 PAL Coder (mode 12,15) for A3020,A4000,A5000,RiscPC	£99.00

Pineapples Virus Protection Scheme has been running for over five years and is still being updated with new viruses on a regular basis. New software versions are sent out to members every three months and the total number of viruses which can be removed is over 100.

Joining fee just £28.20

Inexpensive multi-user licences

'If you're interested in virus protection, join the Pineapple virus protection scheme and buy Killer. Accept no alternative - 'Acorn User Feb 96

As an Acorn Centre of Technology Pineapple Software can help you with ALL your Acorn computer related problems.



Colour Printers

Canon BJC80 - portable col	£233.00
Canon BJC250	£149.00
Canon BJC620 - colour	£229.00
Canon BJC4300	£198.00
Canon BJC4550 (A3)	£287.00
Canon BJC5500 (A2)	£649.00
Epson Stylus 200 mono	£139.00
Epson Stylus 200 colour	£179.00
Epson Stylus Colour 400	£159.00
Epson Stylus Colour 600	£198.00
Epson Stylus Colour 800	£259.00
Epson Stylus Colour 850	£299.00
HP Deskjet 690C	£259.00
HP Deskjet 870C	£369.00
HP Laserjet 6L (laser mono)	£279.00

Other Items

Acorn !Browse (CD only)	£39.99
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RiscOS 3.7 upgrade	£58.75
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Sibelius 7 Student v3.5	£459.00
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Acorn Netstation (Ethernet)	£351.33
Acorn Netstation (Modem)	£351.33
A7000 upgrade to A7000+	£249.00

We have many items in stock which are not shown in this advert. Please ask for anything you require which may not be shown. We also undertake repairs and upgrades to all Acorn computer models. Collection can be arranged if necessary.

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'Pineapple offer some of the finest and friendliest after sales support you will find' - Acorn User Mar 96

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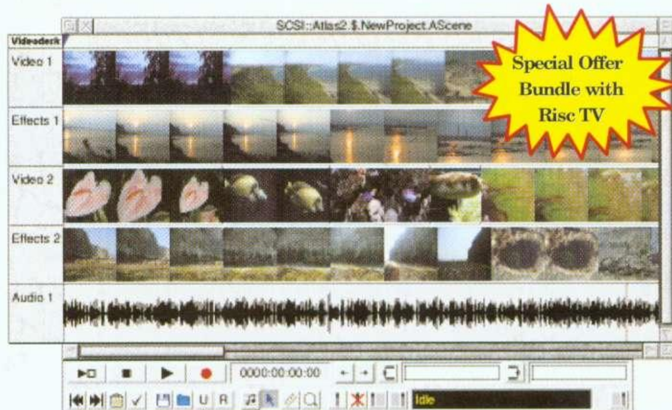
Videodesk

Non-Linear Video Editing System.

Videodesk is a significant advance in video editing for Acorn machines which allows full-size, full-colour and full-motion video to be compressed to disc in real-time. The compressed video is edited frame accurately and output back to video for recording or display. Unlike tape-based editing systems there is no generation loss and edits can be played back instantly.

Key Features:

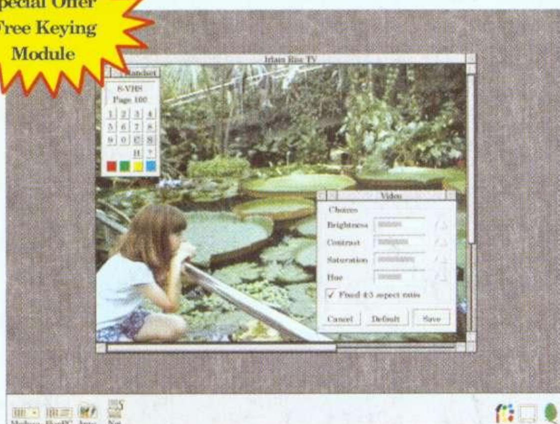
- Composite and S-Video inputs and outputs.
- 50 fields per second capture and playback.
- 24 bit colour range.
- Resolution of up to 768 pixels x 576 lines.
- High-quality uncompressed still grabs.
- VITC Timecode input and output.
- 16 bit stereo audio inputs and outputs.
- Audio sampling at up to CD and DAT rates.
- Multiple audio tracks (polyphonic).
- High performance Replay movie capture.
- Multi-level undo and redo.
- Edit Decision List (EDL) generation.



Videodesk is supplied complete with video editing software as standard, which is sophisticated, flexible and simple-to-use. Editing is done on a multi-track time-line with separate audio and video tracks. Effects are generated digitally and include over 100 dissolves, wipes, fades and slides. Software is being continually developed and comprehensive titling software is now available at no extra cost. Titles are generated using the outline font system and can scroll, flash, fade and be overlayed onto the video or appear on their own. Titling is done digitally and does not require a Genlock.

RiscTV is supported for on-screen monitoring up to full-screen size and there is a specially priced bundle when purchased together with **Videodesk**. **RiscTV** and **Videodesk** are both available now. See below for more information about **RiscTV**.

Risc TV Desktop Television System.



Risc TV is a unique multimedia digitiser complete with built-in television tuner and audio processor. It allows you to watch television on the desktop and digitise high quality still images from the tuner or an external video source.

RiscTV has special hardware which is used to update the screen, so your computer runs at full speed and the real-time display is always true colour (24 bit) irrespective of screen mode. The display can also be scaled to any size or made full-screen.

- Suitable for A5000, A7000, and Risc PC.
- On-screen sizes of over 1024 x 768.
- Real-time scaling, filtering and control of contrast, brightness and saturation.
- Auxiliary inputs for Composite & S-Video.
- Low-cost Teletext option.
- Optional keying module allows **Risc TV**'s display to be obscured by other objects and still provide real-time overlay.
- Optional audio upgrade provides NICAM stereo audio, 16 bit sound sampling, audio mixing, plus Replay movie capture.

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Please note: Videodesk requires a RISC PC, large fast hard disc and 8Mb RAM minimum. A StrongARM processor is recommended. Check suitability for your computer before ordering. 1 years guarantee. E & OE.
*To obtain good quality video requires storage of around 1.5Mb per second (5.4Gb per hour).

